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1830.

2 BARON HEURTELOUP'S METHOD OF PERFORMING CATHETERISM.

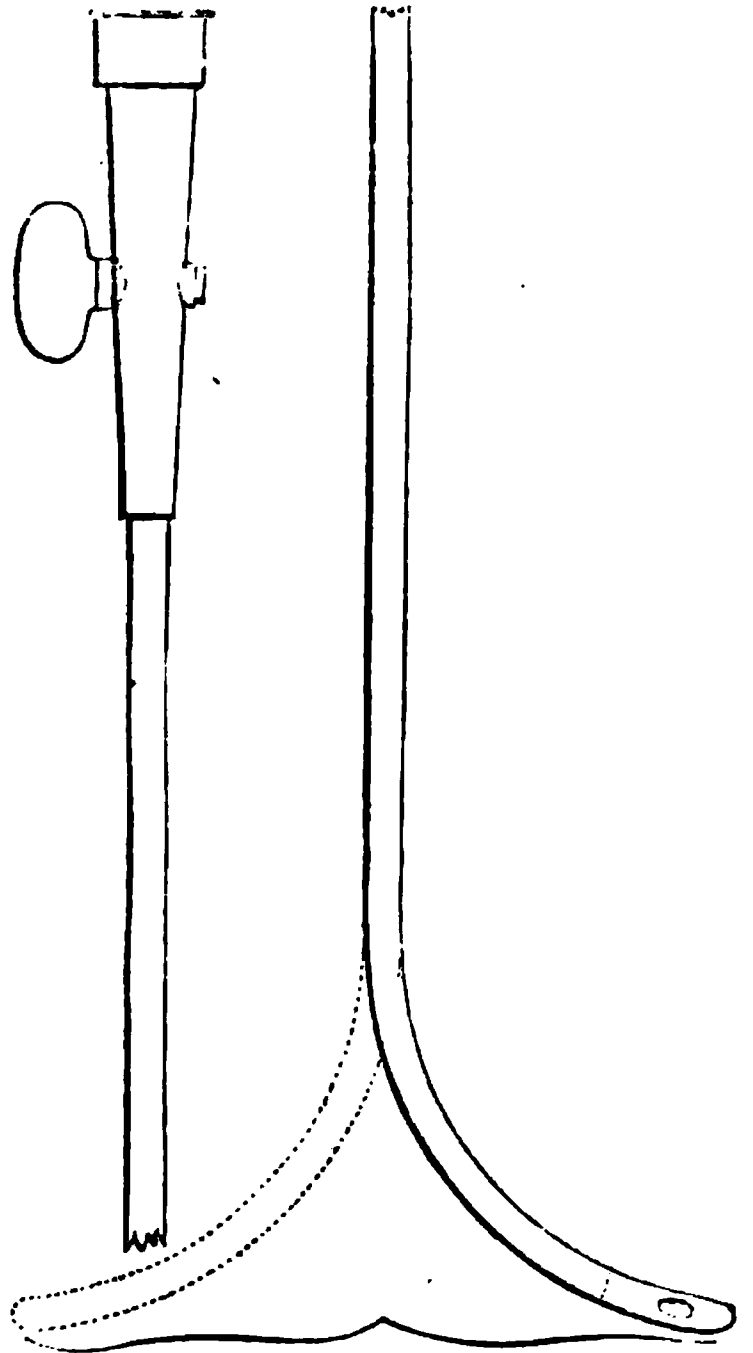
But if the *lithotomist* was not obliged to sound in such a way as to ascertain correctly all the particulars, it is absolutely necessary that the *lithotritter* should inform himself accurately of the state and form of the organ in which his instruments are to act, and of the stone against which the action of those instruments is to be directed.

After first discovering the stone, he must appreciate its size, density, nature, form, and position; ascertain the form and capacity of the urethra; the shape and size of the bladder—the greater or less regularity of its internal surface—the extent from the neck to the side—its depth below the neck—its width and power of contraction; for these are all circumstances the knowledge of which is essentially necessary to the lithotritter, and without which he cannot act with that certainty and precision which an operation requires, where its success depends on the strict observance of all the rules of prudence, the exact knowledge of the organ in which he is about to operate, and of the body which he is to destroy.

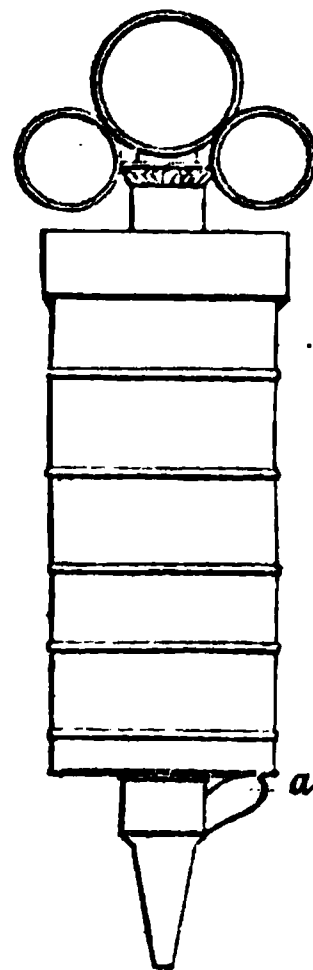
In the impossibility of obtaining all this with the sound generally used for this purpose, it was found necessary to give another form to the instrument, with which the exploration of the bladder might be conveniently made.

This instrument is a silver tube, two lines and a half in diameter, having a stop cock at the end, forming the handle. It is perfectly straight, and 8 inches in length to the commencement of the curve at the extremity. Its curve is exactly represented by the quarter of a circumference of a circle, the radius of which is an inch and a half. At the curved extremity there are two eyes, one at each side; and half an inch from its extreme point it screws off, that it may be cleaned with greater facility. The handle end is adapted for the reception of the pipe of the syringe, and, being lined with leather, fits sufficiently accurately to allow the injection of water to be made without any portion escaping by the side. The stop cock, which is inserted a little below the point of the syringe, by being turned, prevents the return of the fluid when enough has been injected; and with this instrument M. Heurteloup performs the sounding, which he designates the "Methodical Recto-curvi-linear Catheterism."

The Catheter, with the mouth to which the pipe of the syringe is adjusted when it is used. A little lower down is the stop-cock.



a This is to enable the pipe to be unscrewed when the syringe is cleaned.



M. Heurteloup's syringe is of silver, with the end of the piston forming a ring; there is also one at each side of

the neck. Thus the fore and middle fingers are introduced through the rings at each side, while the thumb is inserted in the ring end of the piston; so that the syringe can be held and the injection made with one hand, which has the great advantage of leaving the other at liberty to support and direct the sound*.

Such, then, are the two instruments by which the Baron sounds the bladder of a patient in which he suspects a stone, and when he is desirous of ascertaining the fitness of the case for operation. Before commencing the sounding process, he takes care to empty the rectum; because this intestine, accordingly as it is more or less filled, alters the form of the bladder, and increases or diminishes its extent where they are in contact; and as it is precisely in this part of the bladder that the instruments are extended, it is evidently of importance. The patient is sometimes subject to internal hemorrhoids, and these may be so much developed as to project considerably, and consequently form indentations in that part of the bladder.

This precaution taken, and the patient placed on the side of his bed, flat on his back, the head a little raised, and each of his legs placed on a chair, the catheterism is effected with much gentleness. When the extremity of the sound is under the pubes, the curvature of this instrument being exactly adapted to the curve of the urethra from the pubes to the neck of the bladder, it is passed in by merely slightly depressing it. By continuing to depress the sound, and advancing it a little, the whole of the curved part is in the interior of the organ, while that which is straight is entirely in the canal.

From this moment M. Heurteloup is satisfied that the canal will allow the passage of a straight sound, for by the simple act of pushing the curve of the sound into the bladder, the whole of the urethra is brought into a straight line†.

In giving to the sound thus situated

* M. Heurteloup has called this the *surgical syringe*, to distinguish it from the ordinary syringe, which requiring the use of both hands, does not leave the left free.

† As soon as the sound has thus entered the bladder, the stop cock is turned, to allow all the urine in the organ to flow out, and he injects in its place warm water, until the patient feels a moderate desire to void it. The injection, and the consideration more particularly regarding it, are too long to be entered into here. It will be seen in this paper, that the bladder changes form in proportion as there is more or less water injected. There are certain laws respecting the injection.

a slight movement forwards, he estimates, by the manner in which it is grasped, whether the introduction of the straight sound will be easy or difficult. If he can make this movement with the sound easily, it is a proof that the different parts of the canal may be brought into a straight line with facility; if, on the contrary, the sound is tightly grasped, it will be more difficult, and the operation probably more painful.

It must not be believed, therefore, that because the sound is grasped the passage is narrow, for this often happens in very large urethrae. The difficulty of passing it, which is sometimes considerable, depends upon each of the parts of the canal not being readily brought into a straight line.

When the canal is thus in a straight line, the greater or less play of the instrument depends on the degree of laxity of the parts, which give to the canal its natural curvature. When the straight part of the sound is in the full length of the urethra, the end in the bladder is carried upwards by the position of the neck, and equally upwards at the handle by the suspensatory ligament, while it is bound down below by the resistance which the pubes offers; and if the os pubis be very low, the suspensatory ligament very short, and a large prostate greatly raise the neck, these are sufficient reasons for the tight grasping of the sound; for, carried upwards at both extremities, and kept below by the pubes, it is not by the narrowness of the passage, but because it passes three points of the canal, which are brought with difficulty into a straight line, that the instrument is grasped.

When the sound is thus grasped it is an unfavourable condition, for the straight instrument will of necessity be introduced with greater difficulty, less easily suffered, and less easily manœuvred.

Hence he knows, as soon as he has moved the sound a few times forward and backward, if the crushing the stones will be easy or not, as far as the greater or less facility of the canal for the passage of straight instruments is concerned.

Besides ascertaining if the sound moves easily in the canal, he profits by these motions to find out what distance exists between the neck of the bladder and that part of its sides immediately opposite. This calculation is easily made in pushing the sound to the bot-

4 BARON HEURTELOUP'S METHOD OF PERFORMING CATHETERISM.

lom of the organ, and withdrawing it towards the neck: the play of the instrument allows the extent across to be easily ascertained, for the curvature being abrupt, the hooking it below the neck is very perceptible. This movement, therefore, enables him to decide whether the operation would be easy with regard to the extent from before backwards of the bladder. The facility of the operation will be in proportion to this extent, which varies ordinarily from two to four inches, but which is most generally from two inches and a half to three inches*.

By carrying the extremity of the sound from right to left, M. Heurteloup ascertains whether the bladder has sufficient width to allow the operation to be performed with facility. The extent in this direction the best adapted for the advantageous performance of the operation, is assuredly that which, at the same time that it gives sufficient room for the expanding of the instruments, is not so large as to allow the calculi or fragments to lodge themselves at the sides. The bladders which combine these two conditions are those in which the extent from side to side is three inches. It is desirable, then, for the surgeon to ascertain if the organ which he is

* It is this limited extent of the bladder from before backwards which renders the three-branch instrument, used for the destruction of calculi, often dangerous, the branches of which require to be extended a considerable distance beyond the tube, to seize a large stone: if these branches are too long, then it is impossible to manœuvre the instrument. It has been said that the three-branch instrument will seize large stones, and undoubtedly it can, but only by extending the branches very considerably beyond the extent of the external tube, which, it must be evident, renders the instrument inapplicable. It is true, if in drawing it against the neck of the bladder, efforts be made to seize the stone with the instrument "à trois branches," they would be successful, but he who thus operates no longer exercises an art, but a rude business. Nothing in this operation should be done by force; every movement should be skilfully performed, and consequently with gentleness. When it is recollected that these fatiguing and painful manœuvres which the surgeon is obliged to resort to, in order to seize a large stone with this instrument, only lead to the perforation of one hole, and that to make another the same steps must be taken, it will be a subject of surprise that any good surgeon should thus undertake to cure a patient afflicted with a stone of large dimensions.

These considerations induced M. Heurteloup to construct the "*Evideur* with *pince à forceps*." This instrument can be made to grasp, in the same manner as the forceps, large stones, with the branches projecting but a very short distance from the tube, and the branches being moveable separately allow the surgeon to seize the stone without injuring the organ: once grasped, it is scooped out until the sides break in; the fragments are then pulverized by the *bris coque*.

examining has this width. This information is easily acquired by means of M. Heurteloup's sound. The curvature of this instrument being the quarter of the circumference of a circle, the radius of which is one inch and a half; if it can be turned from right to left without the extremity coming in contact with the sides of the bladder, we must then feel convinced that it is three inches wide, since for an inch and a half at each side of the neck there is no resistance. It will be evident that the straightness of that part of the sound which is in the canal allowing the instrument to be turned on its axis, consequently permits the necessary movements to be given to the curved extremity. In order to ascertain the size of the bladder to its greatest possible extent, the Baron moves the instrument to the right and left several times, and at the same moment, by a movement forward, ascertains the depth of the organ from the neck to the part immediately opposite. He also ascertains, by moving the sound as far as possible to each side, if the bladder be much larger than the three inches he desires to find: if the beak of the sound does not touch the sides with facility, he concludes that the operation will probably require a longer time, for the fragments spread in the base of a larger bladder will no longer be placed so immediately under the branches of the instrument.

In these movements to the right and left and upwards he also determines whether the internal surface of the bladder presents many irregularities; as, for example, those fleshy columns which are often met with, and polypus excrescences which are sometimes found attached to the walls of the bladder, and particularly near the neck. It will be seen of how much importance it is to be aware of these excrescences, for they might get entangled with the branches of the instrument with which the operation is performed.

The extent of the bladder from the neck to the opposite side, and laterally, being ascertained, it then becomes necessary to know what is the depth from the neck to the "*basfond*." If the beak of the sound be turned downwards, this will be easily estimated; if it cannot thus be carried from right to left, the depth cannot be considerable, and it will be so much less in proportion as the sound is raised upwards to the level

of the median line. If, on the contrary, the sound turned downwards can be rotated without touching that part of the bladder which is below the neck, we are then sure there must be more than $1\frac{1}{2}$ inch depth, and this is an unfavourable circumstance, for the fragments will be seized with greater difficulty, or at least it will require the instrument to be inclined more perpendicularly downwards, which will be very painful to the patient. This depth below the neck is observed principally in spare subjects. M. Heurteloup provides against the inconvenience which it occasions by raising the pelvis considerably, which he easily effects by means of the little bed which he employs in his operations: when the pelvis is elevated, the fragment is displaced from beneath the neck, and is thrown into the base of the bladder, where it is seized with facility, and without pain to the patient.

During this manœuvre of the sound, which is to give the depth below the neck, M. Heurteloup observes in what degree the rectum projects against the bladder, for the state of this intestine, as has already been observed, influences much the greater or less facility with which the operation is performed. It is of importance, then, to know if this projection be considerable; and it is not until he is perfectly satisfied as to the exact form and dimensions of the bladder* that he directs his attention to the stone, and then the recto-curvilinear sound is greatly advantageous to the appreciation of this foreign body.

The ease with which this sound may be turned on its axis, and advanced or drawn back in the canal, is of wonderful service in acquiring the necessary information; for the facility with which the sound is moved allows the surgeon the full benefit of all the delicacy and precision of his movements.

As soon as M. Heurteloup proceeds to examine the stone, his movements become more gentle, for although, from the walls of the bladder being fixed, he allows himself to make his examination as to its dimension quickly, in order to abridge the catheterism, the mobility of the stone requires greater care; if the sound be manœuvred too quickly, the stone is moved, and does not permit the surgeon to ascertain its form, nature, &c. with precision.

* It may be conceived that this knowledge is acquired with great rapidity, for each movement of the sound gives a measure.

Whatever may be the size of the stone, it is always situated in the "bas-fond" of the bladder, when the patient is in the horizontal position. It is there, then, that he always directs his instrument. When it is found in any other part of the bladder, it is because the precaution has not been taken to inject it with warm water previous to the sounding, and that it is deranged from the place which it ordinarily occupies by the introduction of the catheter. Of course moveable calculi are alone alluded to here. If the stone be large, as it is generally placed on the median line, and that its size raises it on a level with the neck of the bladder, it is felt by the surgeon immediately the instrument is introduced, for the straight part of M. Heurteloup's sound is necessarily in contact with it.

The first thing he ascertains is the mobility of the stone, for on this depends whether it can be seized by the instruments. If he finds the stone immovable, and presenting an extended surface, he concludes that it is large, attached to the base of the bladder, and consequently not a proper case for the action of the lithotritic instruments: unless, indeed, the bladder should be very healthy, and easily dilated with a very large urethra, then the stone might be broken up with success; but these conditions are very rarely found with very bulky stones.

M. Heurteloup, however, before pronouncing this judgment, examines whether this immobility may not depend on the flat form of the stone; for, by this circumstance, a calculus, though not very large, is immovable, and seems to the sound, which merely passes over it, to present a large surface: to ascertain whether the stone is of this description, he carries the curve of the sound flat to the further edge of the stone, carrying the handle towards the thigh, to which the beak is turned: he thus encloses the stone in the curve of the sound, and getting it a little beneath the calculus, he raises it. If the stone is flat, it is raised with facility, and he feels that he could turn it over; if it is round, on the contrary, it may be raised, but it immediately falls back upon the sound*.

The contact of the sound with these

* Besides, the moment when the beak of the sound is pushed under the stone, he feels easily whether it is flat, by the slight distance the sound has moved from the upper to the lower surface,

neck of the bladder with the convexity of the sound, so as to stop its return; for, whenever the stone is above the neck, it is almost impossible to gain an accurate idea of its form and size.

If the bladder should not be deep below the neck, there will be no necessity for turning the sound as has just been described; the simple introduction of it will displace the stone, and throw it off to the right or left. M. Heurteloup still alludes here to a stone of moderate size.

In fine, if the bladder contains one, two, or three small calculi—that is to say, of from four to ten lines—they will be rarely felt in the “basfond” of the bladder by the convexity of the sound; for, as soon as this part of it is carried to the posterior side, the small stone being generally light and rolling, it is moved with too much facility, and often rolls to the sides, and still more frequently below the neck. When it is placed in the lateral parts of the bladder, it is felt with the beak of the sound turned to the right and left; but the least movement, if not made with care, changes its position, and it is no longer touched by the sound. These movements ought to be more gentle and measured, in proportion as the stone is small.

When the stone is of small diameter, and is placed below the neck, it is felt with greater facility, whether the distance between it and the bottom be great or small: if there is but little depth, it is detected with the convexity of the sound, by raising the handle, and consequently depressing the neck; and if, on the contrary, the depth is considerable, the sound is turned so as to present the beak downwards; and as it can be rotated from side to side easily, the stone is certainly found, and its size and form easily appreciated. When the calculus is small, and wedged under the neck of a bladder of only moderate depth, it is touched by the sound with greater difficulty; for the convexity does not sufficiently depress the neck to touch it, and the beak turned downwards, coming in contact with the bottom of the bladder before it gets to the median line, where the stone is generally situated, cannot turn it over. In this case it is necessary to elevate the pelvis considerably; the surgeon will then be able to feel it with the convexity of the sound, for it is carried by

this position to a more distant part of the bladder, and consequently becomes more accessible.

When the bladder contains a great number of small stones, instead of three or four, the surgeon ascertains it very easily; for, collected together in the same part of the base of the bladder, the stones, when moved, convey a sensation produced by their collision against each other.

It sometimes happens, when there is but one stone and it is very small, that it escapes the most methodical researches: it is then useful, when the symptoms leave little doubt as to the existence of a foreign body, to introduce a “pince à forceps,” which is better adapted to discover a stone when it is of this small size, and permits the surgeon to seize and crush it, which converts the sounding into an operation very advantageous to the patient. M. Heurteloup has in this manner cured some patients who had small stones, which, by their great mobility, escaped the touch of the sound but not that of the pincers, which indicated their presence, and seized them at the same moment. In these cases of small stones, the “pince à trois branches” is a most useful instrument, and it was by no means with a view to supersede its use in these cases that Baron Heurteloup undertook his labours.

Such are the data which the lithotritter ought to possess before he commences the operation, and such are the means of quickly acquiring, with mathematical exactness, a knowledge of the organ in which he is going to manœuvre his instruments, and the bodies on which he is to make them act.

When the science only possessed the “instrument à trois branches” of MM. Leroy and Civiale, to arrive at the desirable result of curing calculous patients without an incision, it was, perhaps, less useful to the surgeon to appreciate with accuracy the form and size of both bladder and stone—since this instrument was applied in all cases, against large or small bodies, round or flat, a wide or narrow bladder: the surgeon having only one instrument, had no choice to make. But now, that different mechanical means of destroying the calculi have multiplied the chances of success, and extended the limits of the lithotritic art, it will be evident how important it is to be accurately informed of the different circumstances of each case,

12. SUMMARY

THE SUMMARY OF THE
RESEARCHES IN THE
FIELD OF THE
HUMAN MIND
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IN THE
PAST
FEW
YEARS
AND
THE
RESULTS
ARE
AS
FOLLOWS:

1. THE HUMAN MIND
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AND OF
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TO
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AND
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rotunda, are in an equally perfect state, confusion of sounds must be the consequence, as the nerves spread on the whole labyrinth are so intimately connected that all the mechanical impressions made on them at the same instant must be in unison, or in such proportions as the original conformation of the labyrinth requires from its respective parts of the tympanum.

Some deaf persons cannot hear sounds that are either too high or too low, but only those that are moderate. I conceive that the several parts of the tympanum are in different states of activity in deafness, and presuming that some of the notes of music pass both through the fenestra ovalis and rotunda in modified degrees, and these two parts may be so influenced by any morbid changes as to prevent the production of motion corresponding with the degree of impression required in each of them for unison, the one must confuse or destroy the power of the other; and, therefore, if the voice or music be so managed as either to excite an equable action in both these parts, or be so adapted to one of them as quite to overpower or make no impression on the other, distinct hearing will be the consequence; and perhaps the motion of a carriage, by stimulating all the parts at the same time, produces that equable action which is necessary for fitting the deaf ear for hearing.

In the preceding case, on the restoration of the hearing for two days, the sound from the discharge of the gun acted as a stimulus to the membrana tympani and the nerves distributed in it and the tympanum. Whether the auditory nerves themselves were affected, must admit of some doubt. I have stated in a former paper, that these are not so often implicated as has been supposed; but that deafness, and the noises which accompany it, very often depended on the state of the nerves distributed in the membrane lining the tympanum. The auditory nerves themselves have very seldom been found defective or diseased, yet they may suffer either at their connexion with the brain, as when deafness is accompanied with epilepsy; or in their distribution in the labyrinth, in the same manner the optic nerves and retina do in amaurosis. But I wish to establish that, in a great proportion of habitually deaf people, these

nerves are not affected. If such conclusions lead to no improvement in the cure of deafness, it may appear a useless waste of time to enter into any discussion on the subject; but if a knowledge of the true seat of deafness be gained, a better mode of treating it will follow. If it be proved that deafness is most commonly seated in the tympanum, it is bringing the disease not only to a part more within our knowledge and nearer to the surface, through which remedies may be more efficaciously administered, but the very circumstance of its being within our reach, of its not being primarily seated in the brain and the delicate auditory nerves, may give reasonable ground for presuming that, although the nerves of the tympanum may be implicated, the diseases which involve them may be removed, and, by sufficient care, permanent deafness prevented. I conceive that the foundation of deafness is most frequently laid in childhood, and the inflammatory action which is its origin is not attended to, because it is merely ear-ache, discharge from the ear, &c.; but when this has once begun, exposure to cold, disorders of the digestive organs, &c. renew it, and in time the functions of the affected part become permanently impaired. It is an undoubted fact that modern surgery has prevented not only numerous operations, but deformities; because more care has been taken of incipient complaints, and a rational method of treatment has been adopted for their removal. Why should not this same care extend to one of the most exquisitely formed organs in the body—one on which so much of the comfort of man depends, and the loss of which is so deeply lamented by those who have experienced it? If when inflammation has been set up in the tympanum from any cause, means were taken to counteract its tendency to change of structure, and these were persevered in until the restoration of the organ became perfect, and a repetition of its exciting cause then obviated, why should not deafness be rendered less frequent, as well as blindness, and deformity from diseased joints?

6, Tavistock-Square, Aug. 25, 1820.

and how desirable are these improvements in the ordinary mode of sounding.

The art of breaking up the stone in the bladder is, by its nature, a science which will only arrive at perfection by dividing it into details, and making each part as perfect as possible. The preliminary operation, which consists in acquiring an exact knowledge of the stone and the bladder, is one of the parts of the "ensemble" which influences most forcibly the success of the operation. The first step in advancing the science, then, is to make known the principles and means by which that knowledge is to be acquired.

OBSERVATIONS ON THE TYMPANUM, AS CONNECTED WITH DEAFNESS.

By JOSEPH SWAN, Esq.

(For the London Medical Gazette.)

It is not an unfrequent occurrence for deafness to be produced by very loud sounds, when the ear is unprepared for receiving them; but it is difficult to determine which part of the organ of hearing particularly suffers. I have thought that the injury was done principally to the tympanum, and this opinion is rendered very probable by the following case. I had seen the gentleman who is the subject of it; but as the facts are important, I prefer giving them in his own words:—

"In reply to Mr. Swan's questions, Captain Norton begs to state, that blood only came from the left ear, being in a right line towards the percussion; yet the singing or intense buzzing was equal in both ears—sometimes like the chirping of ten thousand sparrows, and at others a monstrous hissing. The first day Captain Norton could not hear any thing, and the second day could only hear a person who placed his mouth close to the ear, and spoke in a modulated tone; could not hear the high notes of a fife; could not distinguish the tune; he could not hear the boat-swain's call (whistle).

"Some four or five weeks afterwards Captain Norton was again in action, and was close to the muzzle of a gun when fired, and the report most com-

pletely restored his hearing for two days, when the singing again commenced. Captain Norton is of opinion that his hearing is as acute as ever, and it is only the singing which confuses sounds; for when one person only is speaking, he can hear him tolerably well; but when three or four are speaking at the same time, he cannot distinguish any one: he can hear a distant gun or bell as well as any one.

"Portsmouth, August 10th, 1829."

It must, I conceive, be admitted that the membrana tympani was ruptured in the preceding case, to have permitted the flow of blood from the left ear, and that the injury was almost entirely confined to the tympanum. Particular sounds could be heard, but words could not be sufficiently distinguished in a conversation carried on by several persons. These occurrences are very common in deafness, and arise very probably from the membrana tympani and the membrane of the fenestra rotunda not acting in unison. Hearing in the mammalia is, I presume, produced both through an impulse given to the labyrinth by the ossicula, and a modified one to the membrane covering the fenestra rotunda, so that particular sounds are heard through one of these parts and not through the other; for I cannot conceive that the membrane of the fenestra rotunda exists only for modifying the undulations conveyed through the labyrinth from the ossicula.

The membrane covering the interior of the tympanum, as well as that of the fenestra rotunda, may not be in a state for receiving properly the undulations from sound, as it may be thickened, and therefore incapable; or the functions of its nerves may have become impaired, so that its action cannot correspond with that of the membrana tympani; or the latter may alone be affected, whilst the other parts of the ear are healthy.

The membrane of the fenestra ovalis receives the undulations from the membrana tympani through the ossicula, and continues them through the semicircular canals and the scala vestibuli, as far as the apex of the cochlea, where they meet those imparted by the membrane of the fenestra rotunda to the scala tympani; therefore, unless the membrana tympani, and that covering the fenestra

rotunda, are in an equally perfect state, confusion of sounds must be the consequence, as the nerves spread on the whole labyrinth are so intimately connected that all the mechanical impressions made on them at the same instant must be in unison, or in such proportions as the original conformation of the labyrinth requires from its respective parts of the tympanum.

Some deaf persons cannot hear sounds that are either too high or too low, but only those that are moderate. I conceive that the several parts of the tympanum are in different states of activity in deafness, and presuming that some of the notes of music pass both through the fenestra ovalis and rotunda in modified degrees, and these two parts may be so influenced by any morbid changes as to prevent the production of motion corresponding with the degree of impression required in each of them for unison, the one must confuse or destroy the power of the other; and, therefore, if the voice or music be so managed as either to excite an equable action in both these parts, or be so adapted to one of them as quite to overpower or make no impression on the other, distinct hearing will be the consequence; and perhaps the motion of a carriage, by stimulating all the parts at the same time, produces that equable action which is necessary for fitting the deaf ear for hearing.

In the preceding case, on the restoration of the hearing for two days, the sound from the discharge of the gun acted as a stimulus to the membrana tympani and the nerves distributed in it and the tympanum. Whether the auditory nerves themselves were affected, must admit of some doubt. I have stated in a former paper, that these are not so often implicated as has been supposed; but that deafness, and the noises which accompany it, very often depended on the state of the nerves distributed in the membrane lining the tympanum. The auditory nerves themselves have very seldom been found defective or diseased, yet they may suffer either at their connexion with the brain, as when deafness is accompanied with epilepsy; or in their distribution in the labyrinth, in the same manner the optic nerves and retina do in amaurosis. But I wish to establish that, in a great proportion of habitually deaf people, these

nerves are not affected. If such conclusions lead to no improvement in the cure of deafness, it may appear a useless waste of time to enter into any discussion on the subject; but if a knowledge of the true seat of deafness be gained, a better mode of treating it will follow. If it be proved that deafness is most commonly seated in the tympanum, it is bringing the disease not only to a part more within our knowledge and nearer to the surface, through which remedies may be more efficaciously administered, but the very circumstance of its being within our reach, of its not being primarily seated in the brain and the delicate auditory nerves, may give reasonable ground for presuming that, although the nerves of the tympanum may be implicated, the diseases which involve them may be removed, and, by sufficient care, permanent deafness prevented. I conceive that the foundation of deafness is most frequently laid in childhood, and the inflammatory action which is its origin is not attended to, because it is merely ear-ache, discharge from the ear, &c.; but when this has once begun, exposure to cold, disorders of the digestive organs, &c. renew it, and in time the functions of the affected part become permanently impaired. It is an undoubted fact that modern surgery has prevented not only numerous operations, but deformities; because more care has been taken of incipient complaints, and a rational method of treatment has been adopted for their removal. Why should not this same care extend to one of the most exquisitely formed organs in the body—one on which so much of the comfort of man depends, and the loss of which is so deeply lamented by those who have experienced it? If when inflammation has been set up in the tympanum from any cause, means were taken to counteract its tendency to change of structure, and these were persevered in until the restoration of the organ became perfect, and a repetition of its exciting cause then obviated, why should not deafness be rendered less frequent, as well as blindness, and deformity from diseased joints?

6, Tavistock-Square, Aug. 25, 1829.

W. WILSON, PRINTER, 67, SKINNER-STREET, LONDON.

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SATURDAY, OCTOBER 3, 1829.

OBSERVATIONS ON CATHETERISM,

OR THE

*Sounding which ought to precede the operation
for the Crushing of Calculi in the Bladder,
as practised*

By BARON HEURTELoup.

*To the Editor of the London Medical
Gazette.*

SIR,

THE following observations on "Catheterism" have been arranged from Baron Heurteloup's notes, and with his sanction. They have appeared to me to embody much valuable information. If you think them of sufficient importance to occupy a few columns of your Journal, they are at your disposal.

I am, Sir,

Your obedient servant,

J. RUTHERFORD ALCOCK.

September 24.

Previous to an operation for lithotomy, patients were always sounded, in order to ascertain with certainty the existence of a stone. To find the stone, and be convinced of its presence, was of great importance, since nothing short of certainty could justify the surgeon in making the patient run the risk of one of the most dangerous operations of surgery. That which was of the greatest consequence to the lithotomist, was first to prove the existence of the stone, and next to appreciate its size and form. As to its size, it was sufficient if he

could decide whether it was large or small—its intermediate condition could affect him but little: the only alteration would be his making his incision a little freer if it were of middling size. To the form and capacity of the bladder he paid little attention, for whether it was wide or narrow, deep or shallow, it could make little or no change in his mode of operating.

Hence it is that the lithotomist has never given any other form to the sound than that which he thought best adapted to the canal through which it had to pass. With this sound, to which he gave a large curve, he searched for the stone, and proved its presence by passing the convex edge over it, which was naturally parallel with the "bas-fond"* of the bladder, where the stone, on account of its weight, is generally situated. If at any time he wished to gain more precise knowledge respecting the stone, the extent of the curve given to the sound prevented the lateral movements necessary for that purpose; for its point being in contact with the superior surface of the bladder, it could neither be turned to the right nor the left.

As his only object was to prove the presence of the stone, the patient was ordinarily sounded without much water being contained in the bladder: if it happened to be full, he profited by the opportunity; but did not think this essential to the success of his research. To fill the bladder with water before he commenced sounding was not considered useful.

* This term here describes that part of the bladder which, whilst the patient is horizontal, is inferior to the cervix; and consequently includes the trigona and a considerable portion of the circumjacent bladder.

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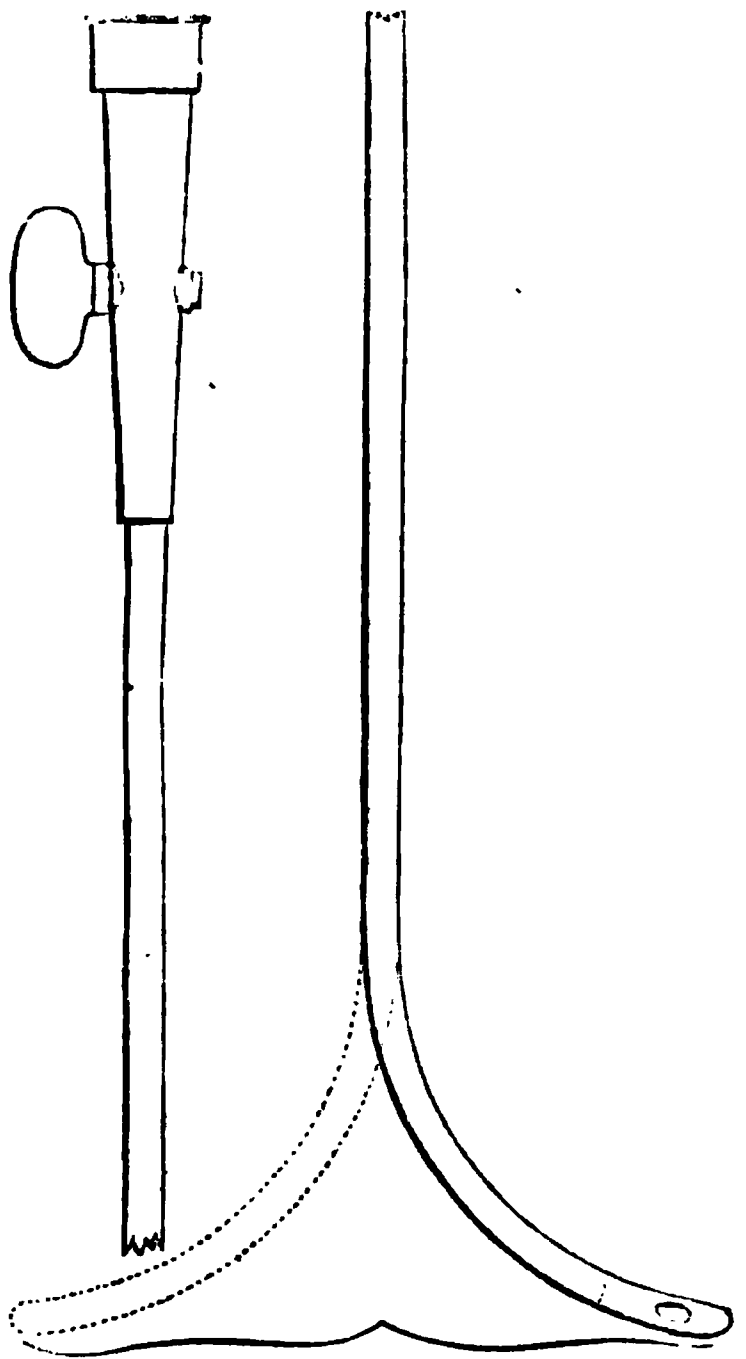
But if the *lithotomist* was not obliged to sound in such a way as to ascertain correctly all the particulars, it is absolutely necessary that the *lithotritter* should inform himself accurately of the state and form of the organ in which his instruments are to act, and of the stone against which the action of those instruments is to be directed.

After first discovering the stone, he must appreciate its size, density, nature, form, and position; ascertain the form and capacity of the urethra; the shape and size of the bladder—the greater or less regularity of its internal surface—the extent from the neck to the side—its depth below the neck—its width and power of contraction; for these are all circumstances the knowledge of which is essentially necessary to the lithotritter, and without which he cannot act with that certainty and precision which an operation requires, where its success depends on the strict observance of all the rules of prudence, the exact knowledge of the organ in which he is about to operate, and of the body which he is to destroy.

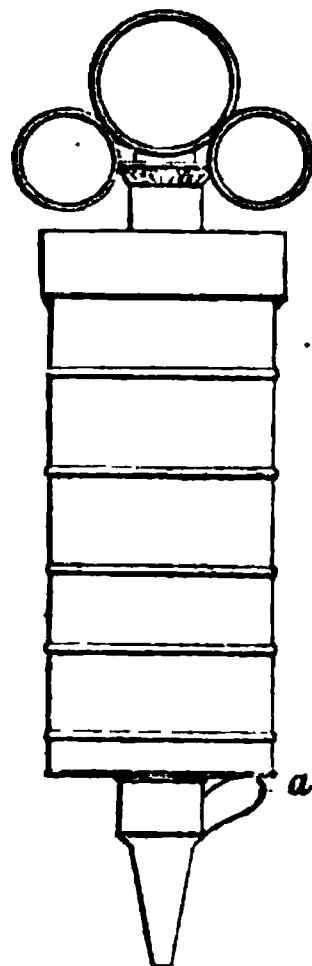
In the impossibility of obtaining all this with the sound generally used for this purpose, it was found necessary to give another form to the instrument, with which the exploration of the bladder might be conveniently made.

This instrument is a silver tube, two lines and a half in diameter, having a stop cock at the end, forming the handle. It is perfectly straight, and 8 inches in length to the commencement of the curve at the extremity. Its curve is exactly represented by the quarter of a circumference of a circle, the radius of which is an inch and a half. At the curved extremity there are two eyes, one at each side; and half an inch from its extreme point it screws off, that it may be cleaned with greater facility. The handle end is adapted for the reception of the pipe of the syringe, and, being lined with leather, fits sufficiently accurately to allow the injection of water to be made without any portion escaping by the side. The stop cock, which is inserted a little below the point of the syringe, by being turned, prevents the return of the fluid when enough has been injected; and with this instrument M. Heurteloup performs the sounding, which he designates the "Methodical Recto-curvi-linear Catheterism."

The Catheter, with the mouth to which the pipe of the syringe is adjusted when it is used. A little lower down is the stop-cock.



a This is to enable the pipe to be unscrewed when the syringe is cleaned.



M. Heurteloup's syringe is of silver, with the end of the piston forming a ring; there is also one at each side of

the neck. Thus the fore and middle fingers are introduced through the rings at each side, while the thumb is inserted in the ring end of the piston; so that the syringe can be held and the injection made with one hand, which has the great advantage of leaving the other at liberty to support and direct the sound*.

Such, then, are the two instruments by which the Baron sounds the bladder of a patient in which he suspects a stone, and when he is desirous of ascertaining the fitness of the case for operation. Before commencing the sounding process, he takes care to empty the rectum; because this intestine, according as it is more or less filled, alters the form of the bladder, and increases or diminishes its extent where they are in contact; and as it is precisely in this part of the bladder that the instruments are extended, it is evidently of importance. The patient is sometimes subject to internal hemorrhoids, and these may be so much developed as to project considerably, and consequently form indentations in that part of the bladder.

This precaution taken, and the patient placed on the side of his bed, flat on his back, the head a little raised, and each of his legs placed on a chair, the catheterism is effected with much gentleness. When the extremity of the sound is under the pubes, the curvature of this instrument being exactly adapted to the curve of the urethra from the pubes to the neck of the bladder, it is passed in by merely slightly depressing it. By continuing to depress the sound, and advancing it a little, the whole of the curved part is in the interior of the organ, while that which is straight is entirely in the canal.

From this moment M. Heurteloup is satisfied that the canal will allow the passage of a straight sound, for by the simple act of pushing the curve of the sound into the bladder, the whole of the urethra is brought into a straight line†.

In giving to the sound thus situated

* M. Heurteloup has called this the *surgical syringe*, to distinguish it from the ordinary syringe, which requiring the use of both hands, does not leave the left free.

† As soon as the sound has thus entered the bladder, the stop cock is turned, to allow all the urine in the organ to flow out, and he injects in its place warm water, until the patient feels a moderate desire to void it. The injection, and the consideration more particularly regarding it, are too long to be entered into here. It will be seen in this paper, that the bladder changes form in proportion as there is more or less water injected. There are certain laws respecting the

a slight movement forwards, he estimates, by the manner in which it is grasped, whether the introduction of the straight sound will be easy or difficult. If he can make this movement with the sound easily, it is a proof that the different parts of the canal may be brought into a straight line with facility; if, on the contrary, the sound is tightly grasped, it will be more difficult, and the operation probably more painful.

It must not be believed, therefore, that because the sound is grasped the passage is narrow, for this often happens in very large urethrae. The difficulty of passing it, which is sometimes considerable, depends upon each of the parts of the canal not being readily brought into a straight line.

When the canal is thus in a straight line, the greater or less play of the instrument depends on the degree of laxity of the parts, which give to the canal its natural curvature. When the straight part of the sound is in the full length of the urethra, the end in the bladder is carried upwards by the position of the neck, and equally upwards at the handle by the suspensatory ligament, while it is bound down below by the resistance which the pubes offers; and if the os pubis be very low, the suspensatory ligament very short, and a large prostate greatly raise the neck, these are sufficient reasons for the tight grasping of the sound; for, carried upwards at both extremities, and kept below by the pubes, it is not by the narrowness of the passage, but because it passes three points of the canal, which are brought with difficulty into a straight line, that the instrument is grasped.

When the sound is thus grasped it is an unfavourable condition, for the straight instrument will of necessity be introduced with greater difficulty, less easily suffered, and less easily manœuvred.

Hence he knows, as soon as he has moved the sound a few times forward and backward, if the crushing the stones will be easy or not, as far as the greater or less facility of the canal for the passage of straight instruments is concerned.

Besides ascertaining if the sound moves easily in the canal, he profits by these motions to find out what distance exists between the neck of the bladder and that part of its sides immediately opposite. This calculation is easily made in pushing the sound to the bot-

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lom of the organ, and withdrawing it towards the neck: the play of the instrument allows the extent across to be easily ascertained, for the curvature being abrupt, the hooking it below the neck is very perceptible. This movement, therefore, enables him to decide whether the operation would be easy with regard to the extent from before backwards of the bladder. The facility of the operation will be in proportion to this extent, which varies ordinarily from two to four inches, but which is most generally from two inches and a half to three inches*.

By carrying the extremity of the sound from right to left, M. Heurteloup ascertains whether the bladder has sufficient width to allow the operation to be performed with facility. The extent in this direction the best adapted for the advantageous performance of the operation, is assuredly that which, at the same time that it gives sufficient room for the expanding of the instruments, is not so large as to allow the calculi or fragments to lodge themselves at the sides. The bladders which combine these two conditions are those in which the extent from side to side is three inches. It is desirable, then, for the surgeon to ascertain if the organ which he is

* It is this limited extent of the bladder from before backwards which renders the three-branch instrument, used for the destruction of calculi, often dangerous, the branches of which require to be extended a considerable distance beyond the tube, to seize a large stone: if these branches are too long, then it is impossible to manœuvre the instrument. It has been said that the three-branch instrument will seize large stones, and undoubtedly it can, but only by extending the branches very considerably beyond the extent of the external tube, which, it must be evident, renders the instrument inapplicable. It is true, if in drawing it against the neck of the bladder, efforts be made to seize the stone with the instrument "à trois branches," they would be successful, but he who thus operates no longer exercises an art, but a rude business. Nothing in this operation should be done by force; every movement should be skillfully performed, and consequently with gentleness. When it is recollected that these fatiguing and painful manœuvres which the surgeon is obliged to resort to, in order to seize a large stone with this instrument, only lead to the perforation of one hole, and that to make another the same steps must be taken, it will be a subject of surprise that any good surgeon should thus undertake to cure a patient afflicted with a stone of large dimensions.

These considerations induced M. Heurteloup to construct the "*Evideur* with *pince à forceps*." This instrument can be made to grasp, in the same manner as the forceps, large stones, with the branches projecting but a very short distance from the tube, and the branches being moveable separately allow the surgeon to seize the stone without injuring the organ: once grasped, it is scooped out until the sides break in; the fragments are then pulverized by the *bric à coudre*.

examining has this width. This information is easily acquired by means of M. Heurteloup's sound. The curvature of this instrument being the quarter of the circumference of a circle, the radius of which is one inch and a half; if it can be turned from right to left without the extremity coming in contact with the sides of the bladder, we must then feel convinced that it is three inches wide, since for an inch and a half at each side of the neck there is no resistance. It will be evident that the straightness of that part of the sound which is in the canal allowing the instrument to be turned on its axis, consequently permits the necessary movements to be given to the curved extremity. In order to ascertain the size of the bladder to its greatest possible extent, the Baron moves the instrument to the right and left several times, and at the same moment, by a movement forward, ascertains the depth of the organ from the neck to the part immediately opposite. He also ascertains, by moving the sound as far as possible to each side, if the bladder be much larger than the three inches he desires to find: if the beak of the sound does not touch the sides with facility, he concludes that the operation will probably require a longer time, for the fragments spread in the base of a larger bladder will no longer be placed so immediately under the branches of the instrument.

In these movements to the right and left and upwards he also determines whether the internal surface of the bladder presents many irregularities; as, for example, those fleshy columns which are often met with, and polypus excrescences which are sometimes found attached to the walls of the bladder, and particularly near the neck. It will be seen of how much importance it is to be aware of these excrescences, for they might get entangled with the branches of the instrument with which the operation is performed.

The extent of the bladder from the neck to the opposite side, and laterally, being ascertained, it then becomes necessary to know what is the depth from the neck to the "*basfond*." If the beak of the sound be turned downwards, this will be easily estimated; if it cannot thus be carried from right to left, the depth cannot be considerable, and it will be so much less in proportion as the sound is raised upwards to the level

of the median line. If, on the contrary, the sound turned downwards can be rotated without touching that part of the bladder which is below the neck, we are then sure there must be more than $1\frac{1}{2}$ inch depth, and this is an unfavourable circumstance, for the fragments will be seized with greater difficulty, or at least it will require the instrument to be inclined more perpendicularly downwards, which will be very painful to the patient. This depth below the neck is observed principally in spare subjects. M. Heurteloup provides against the inconvenience which it occasions by raising the pelvis considerably, which he easily effects by means of the little bed which he employs in his operations: when the pelvis is elevated, the fragment is displaced from beneath the neck, and is thrown into the base of the bladder, where it is seized with facility, and without pain to the patient.

During this manœuvre of the sound, which is to give the depth below the neck, M. Heurteloup observes in what degree the rectum projects against the bladder, for the state of this intestine, as has already been observed, influences much the greater or less facility with which the operation is performed. It is of importance, then, to know if this projection be considerable; and it is not until he is perfectly satisfied as to the exact form and dimensions of the bladder* that he directs his attention to the stone, and then the recto-curvilinear sound is greatly advantageous to the appreciation of this foreign body.

The ease with which this sound may be turned on its axis, and advanced or drawn back in the canal, is of wonderful service in acquiring the necessary information; for the facility with which the sound is moved allows the surgeon the full benefit of all the delicacy and precision of his movements.

As soon as M. Heurteloup proceeds to examine the stone, his movements become more gentle, for although, from the walls of the bladder being fixed, he allows himself to make his examination as to its dimension quickly, in order to abridge the catheterism, the mobility of the stone requires greater care; if the sound be manœuvred too quickly, the stone is moved, and does not permit the surgeon to ascertain its form, nature, &c. with precision.

* It may be conceived that this knowledge is acquired with great rapidity, for each movement of the sound gives a measure.

Whatever may be the size of the stone, it is always situated in the "bas-fond" of the bladder, when the patient is in the horizontal position. It is there, then, that he always directs his instrument. When it is found in any other part of the bladder, it is because the precaution has not been taken to inject it with warm water previous to the sounding, and that it is deranged from the place which it ordinarily occupies by the introduction of the catheter. Of course moveable calculi are alone alluded to here. If the stone be large, as it is generally placed on the median line, and that its size raises it on a level with the neck of the bladder, it is felt by the surgeon immediately the instrument is introduced, for the straight part of M. Heurteloup's sound is necessarily in contact with it.

The first thing he ascertains is the mobility of the stone, for on this depends whether it can be seized by the instruments. If he finds the stone immovable, and presenting an extended surface, he concludes that it is large, attached to the base of the bladder, and consequently not a proper case for the action of the lithotritic instruments: unless, indeed, the bladder should be very healthy, and easily dilated with a very large urethra, then the stone might be broken up with success; but these conditions are very rarely found with very bulky stones.

M. Heurteloup, however, before pronouncing this judgment, examines whether this immobility may not depend on the flat form of the stone; for, by this circumstance, a calculus, though not very large, is immovable, and seems to the sound, which merely passes over it, to present a large surface: to ascertain whether the stone is of this description, he carries the curve of the sound flat to the further edge of the stone, carrying the handle towards the thigh, to which the beak is turned: he thus encloses the stone in the curve of the sound, and getting it a little beneath the calculus, he raises it. If the stone is flat, it is raised with facility, and he feels that he could turn it over; if it is round, on the contrary, it may be raised, but it immediately falls back upon the sound*.

The contact of the sound with these

* Besides, the moment when the beak of the sound is pushed under the stone, he feels easily whether it is flat, by the slight distance the sound has moved from the upper to the lower surface,

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large stones enables him to decide if they are smooth or rough, and whether they yield a clear or dead sound, circumstances which throw some light on the nature of the stone, and consequently the chances of success for the operation.

But, under any circumstances, those stones rendered immovable by their size are rarely adapted to the lithotritic process. Therefore, when their size is fully ascertained, it is of little use to continue the sounding.

When the stone is of moderate size, that is, when it is from 10 to 15 lines in diameter, the sound does not always meet it on entering the bladder: to find it, the instrument must be carried completely into the "basfond" of the bladder, the beak upwards; without this movement the stone will be immediately opposite the instrument, and according as its form allows it to roll with greater or less facility, it rests opposite the instrument, or rolls to one side. This motion of the stone is a favourable symptom, for it is rarely observed, except where the stone is nearly round, and this spherical form is of great advantage, and augurs well for the success of the operation.

If in carrying the point of the sound to that part of the bladder immediately opposite the neck, we do not find the stone, the sound must be drawn gently back, inclining it alternately to the right and left, and raising the handle a little so as to depress the neck of the bladder. In this manner it may be determined whether the stone is situated laterally or below the neck.

If it be situated laterally, it will be felt by the beak of the sound to one side or the other, and as the movement given is very gentle, the stone is not displaced but "caressed" by the instrument, which, on account of the facility with which it turns on its axis, allows the surgeon to follow the stone in all its contours, to measure it, move it, and ascertain its nature*. This movement,

which consists in carrying alternately the beak of the sound to the right and left, determines if the stone be situated laterally: if the sound, after having touched at the right, touches one to the left also, this double sensation is the certain indication of the presence of two stones in the bladder; for, if the base of this viscus be divided in two equal parts by the convexity of the curvature of the sound, and this convexity is not upon a stone, we are then certain that the double sensation is produced by two stones, and not by the alternate shock of the end of the sound on each extremity of a large stone. It is, nevertheless, almost impossible to be mistaken, for a large stone is always immovable, and placed centrally in the base, and stones so small as to be situated to one or other of the sides of the sound are moveable. It sometimes happens that we may convince ourselves of the existence of more than two stones, for after having felt a calculus to the right and another to the left, we find two in one or other of the sides, but the sensation obtained is too fugitive to enable us to decide whether there be three or four.

When a stone of moderate size exists in the bladder, and the sound does not meet with it either at the base of the bladder, opposite the neck, or laterally, it is situated under the cervix; and often, in drawing the sound back, raising the handle a little to depress the neck, M. Heurdeloup has felt the stone with that part of the sound where the curve ends in the straight line. In this case, as it is important to know whether the stone can easily be dislodged from its place, and also as it is necessary to displace it, in order to study it more effectively, he turns the beak of the sound towards the base of the bladder; and if this be deep enough below the neck to allow it to pass easily from side to side, the stone is easily removed, and he pushes it to the right or the left; and in order to keep it in that favourable situation, he depresses slightly the

and he then confines himself to this, without deranging it, which would give pain to the patient. He only displaces it when he is on the point of destroying it, which he does with the brise coque, the only instrument applicable to these kinds of stones.

* It is in stones of from 8 to 15 and 18 lines in diameter, that it is required to have their form, nature, and position, particularly ascertained; for it is in these kinds of stones that it is most generally necessary to apply the instruments, and in

which it is most difficult for the surgeon to determine on one system of destruction in preference to another. When the calculi exceed 18 lines in diameter, they no longer come under the class adapted to the action of the instrument; and when they are less than 8 lines, it is of little consequence what instrument is employed; they will be destroyed equally well with the brise coque or the instrument with three branches.

neck of the bladder with the convexity of the sound, so as to stop its return; for, whenever the stone is above the neck, it is almost impossible to gain an accurate idea of its form and size.

If the bladder should not be deep below the neck, there will be no necessity for turning the sound as has just been described; the simple introduction of it will displace the stone, and throw it off to the right or left. M. Heurteloup still alludes here to a stone of moderate size.

In fine, if the bladder contains one, two, or three small calculi—that is to say, of from four to ten lines—they will be rarely felt in the “*basfond*” of the bladder by the convexity of the sound; for, as soon as this part of it is carried to the posterior side, the small stone being generally light and rolling, it is moved with too much facility, and often rolls to the sides, and still more frequently below the neck. When it is placed in the lateral parts of the bladder, it is felt with the beak of the sound turned to the right and left; but the least movement, if not made with care, changes its position, and it is no longer touched by the sound. These movements ought to be more gentle and measured, in proportion as the stone is small.

When the stone is of small diameter, and is placed below the neck, it is felt with greater facility, whether the distance between it and the bottom be great or small: if there is but little depth, it is detected with the convexity of the sound, by raising the handle, and consequently depressing the neck; and if, on the contrary, the depth is considerable, the sound is turned so as to present the beak downwards; and as it can be rotated from side to side easily, the stone is certainly found, and its size and form easily appreciated. When the calculus is small, and wedged under the neck of a bladder of only moderate depth, it is touched by the sound with greater difficulty; for the convexity does not sufficiently depress the neck to touch it, and the beak turned downwards, coming in contact with the bottom of the bladder before it gets to the median line, where the stone is generally situated, cannot turn it over. In this case it is necessary to elevate the pelvis considerably; the surgeon will then be able to feel it with the convexity of the sound, for it is carried by

this position to a more distant part of the bladder, and consequently becomes more accessible.

When the bladder contains a great number of small stones, instead of three or four, the surgeon ascertains it very easily; for, collected together in the same part of the base of the bladder, the stones, when moved, convey a sensation produced by their collision against each other.

It sometimes happens, when there is but one stone and it is very small, that it escapes the most methodical researches: it is then useful, when the symptoms leave little doubt as to the existence of a foreign body, to introduce a “*pince à forceps*,” which is better adapted to discover a stone when it is of this small size, and permits the surgeon to seize and crush it, which converts the sounding into an operation very advantageous to the patient. M. Heurteloup has in this manner cured some patients who had small stones, which, by their great mobility, escaped the touch of the sound but not that of the pincers, which indicated their presence, and seized them at the same moment. In these cases of small stones, the “*pince à trois branches*” is a most useful instrument, and it was by no means with a view to supersede its use in these cases that Baron Heurteloup undertook his labours.

Such are the data which the lithotritter ought to possess before he commences the operation, and such are the means of quickly acquiring, with mathematical exactness, a knowledge of the organ in which he is going to manœuvre his instruments, and the bodies on which he is to make them act.

When the science only possessed the “*instrument à trois branches*” of MM. Leroy and Civiale, to arrive at the desirable result of curing calculous patients without an incision, it was, perhaps, less useful to the surgeon to appreciate with accuracy the form and size of both bladder and stone—since this instrument was applied in all cases, against large or small bodies, round or flat, a wide or narrow bladder: the surgeon having only one instrument, had no choice to make. But now, that different mechanical means of destroying the calculi have multiplied the chances of success, and extended the limits of the lithotritic art, it will be evident how important it is to be accurately informed of the different circumstances of each case,

of a profession of which he will then have become an ornament and a support. Let him follow the example of John Hunter, of whose life we have inserted a sketch, for the express purpose of calling the attention of our younger friends to the manner in which that truly great man raised himself above all his fellow students, by the indefatigable zeal, industry, and talent, with which he met all the difficulties opposed to his advancement.

MIDDLESEX HOSPITAL.

WE beg to direct attention to the contradiction of some falsehoods in the *Lancet* of last week, with regard to this Hospital. We have made inquiry, and find that the statement as to pupils, contained in a letter in our present Number, signed "John Middlesex," is correct.

ST. GEORGE'S HOSPITAL.

THE south wing of this magnificent structure has been finished for some time, and is now filled with patients, in addition to those who are still received in the old building. The new wards are lofty and commodious, and calculated to afford every comfort to the patients that their situation admits of. A theatre for pathological examinations has been constructed, and the whole arrangements are such as will render this Hospital one of the most complete in the metropolis.

LONDON UNIVERSITY—MR. BELL'S INTRODUCTORY LECTURE.

October 1, 1839.

MR. BELL was received, by a crowded audience, in a manner worthy of the body whom he represented, and of his own individual rank as a man of science, as well as an experienced and popular teacher. We regret that neither time nor space admits of a *verbatim* copy of his lecture, but we subjoin a copious abstract, embracing the principal points.

Mr. Bell began with the only remark in which he did not carry with him the feelings of his hearers. "I (said the professor) am known only by the work of my hands, and I cannot but re-

gret that the honour of addressing you has not fallen on some of my more learned colleagues."

The lecturer in the first place alluded to the eminence of the private teachers of medicine in London, and the zeal they displayed in maintaining their schools. He hoped that the foundation of this university did not tend to discourage private teaching, but rather to raise it to greater respectability, and that if it threw difficulties in the way of those embarked in teaching, at their commencement, it would promise them more honour in the sequel.

He then took a view of the origin of other universities, remarking their connexion with the church, and the eminent services they had rendered. To them every Englishman was largely indebted. "The extension of his language (said the lecturer) over half the globe, and the wide spreading influence of his country's laws and customs—a conquest which makes none to mourn—was most of all to be attributed to the early and continued labours of those ancient establishments for learning. But when we consider the new objects which have arisen in our day, and especially the necessity for encouraging high professional attainments, new institutions must arise with the occasion for them." He then showed the necessity of a more intimate blending of science with education than exists in the systems of the old universities. In a review of the Scottish seminaries, he pointed out the differences in their foundations arising from the events of the reformation, and the peculiar church government of Scotland. They are less under the restraint of church discipline, have fewer livings to bestow, and no patronage in the church. By whatever means it happened, he remarked, discoveries in science have ever found immediate countenance, and zealous and ardent prosecutors in these universities. They have stood foremost among the schools of Europe for the ready encouragement of every improvement. In morals and in metaphysics the names of Hutchinson and Adam Smith, Reid and Stewart, must ever be remembered with gratitude. In mathematics and physics, the Gregorys, MacLaurin, Simson, and Playfair, rank high; whilst in chemistry and in medicine, the fame of Black and Cullen, and the Munros, has spread wherever these

sciences are known. But it would appear that these universities have retained so much of their ancient and too formal constitution as to require periodical visitations and reforms,—as in the royal commission now sitting for the revival of the universities in Scotland.

The lecturer in the next place drew attention to the excellency of the constitution of the London University, and the means which it possesses of accommodating itself to the necessities of the times without any violent revolution. The peculiarity to which he alluded might be referred to two causes. 1. The extensive connexion which is necessarily maintained between this institution and a vast body of the public, by means of the numerous shareholders. Even by the tie of property, but much more by the regard which they must have for the education of their children, all those persons are deeply interested in seeing that this university shall continue to cultivate in the best and most approved manner the learning, sciences, and arts, which are useful to men engaged in the pursuits of active life. But—

2. The institution is not left to the popular impulse of so large a body. This impulse, while it serves to give the spirit of improvement, is under the immediate direction of a council, by whom the whole machinery is guided. This council consists, not of men suddenly raised to the exercise of power, and liable to abuse it from its novelty, but of men who are accustomed to exercise their talents and zeal in higher places; and who, in fact, descend to most painful minutiae when they give up their higher occupations to assemble here.

In this constitution there is a perpetual source of activity; a connexion with the better and wiser part of society; a participation of the influence of practical men—with men of rank and of genius; an arrangement which, in every succeeding year, will add to the usefulness, and consequently the reputation, of the university.

The members of the council sit before their professors on many occasions, hearing the examinations of the pupils, marking their progress, and observing the effects of the modes of teaching;—thus, as it were, partaking of the labours of the professors, and participating in their anxieties, so that they are well prepared to judge of what is best for the institution and the public.

The ambition of the student is highly

excited by feeling that his efforts are not to be made in solitude and obscurity, but that his successful exertions are noticed, and that distinction awaits him. It was to be expected, when men of the first rank and genius became the patrons of this university, that the influence would spread, and that others would lend their aid in so meritorious a work. It is with great pleasure, therefore, that he had to announce that the right honorable Charles Wynne had presented, for the disposal of the council, a surgeoncy in the Honorable East India Company's Service. It required no great prescience to foretell the happy consequence of this. When men of influence consider how often they are betrayed into giving a provision for the very least deserving, he hoped that they might see the virtue of aiding the council in their exertions for the public service, through rewards bestowed on individual merit.

In regard to the professors, he remarked, that it is an unspeakable advantage in such institutions that there is a force silently but incessantly operating towards improvement in the art of teaching. Without taking from him that highest privilege which belongs to a zealous professor—the credit of improving the methods of teaching and extending his course—the presence of the council must keep alive the spirit of emulation. There is no necessity for those periodical and almost violent interferences by means of college discipline, which scarcely ever fail to occasion unpleasant feelings when new codes and regulations are enacted legislatively by a special commission. Contrasted with this, the arrangement in this university leads to reformation by degrees, gently, and without offence. Whatever is amiss is at once put into a course of amendment: it is an effect like that perpetual watchfulness of the public mind maintained by means of a free press over all national councils; and which is at once the most vigilant to correct negligence and error, and the most efficacious in reformation.

The lecturer, after some further observations, proceeded to say, that if, in the constitution of other universities, as compared with this, there was reason for them to congratulate themselves, so there was also reason to rejoice in the time and place, and circumstances, in which their efforts were to be made.

As to time, there was a change in the

public mind, from that which characterized it in the preceding age, the result of the eventful period in which we have lived. The rise and fall of great men, and the revolutions of nations, have been crowded into so small a space of time, that the moral may be drawn as from a drama; and men have witnessed tragedies, with so much resemblance to the rapid shifting of a scene, that they have actually complained that the great have fallen in the course of nature, and not, according to the dramatic rule, by their own hand. Whilst, amidst all these feverish changes of opinion, the advantages of the ancient institutions of the country, in giving security against too rapid innovation, is deeply felt, there has arisen a sentiment almost universal, that education is the best foundation of sound principles, and that, if knowledge had been more general, much of the evil would have been prevented which has been witnessed in our days.

As to place, there are certainly some people (those who lead retired lives) who imagine that vice reigns triumphant in London, and who indulge the thought that purity and peace inhabit the thatched cottage in the retired fields and woodlands. But wiser men say that both are exaggerations, and that every where vice and misery dwell with ignorance. If there be disadvantages in the education of youth in London, these disadvantages may be foreseen and obviated; but, on the other hand, how great are the advantages! What man of science, or learning, does not seek, as it were, his kindred, in London? Who does not pine for the advantages which men may here enjoy, in our museums, libraries, gardens, and learned societies? But there is another advantage to the University which must not pass unnoticed. When the professors shall, by a double portion of labour, have established their several classes, the Council may call learned and ingenious men from all parts of the world, to raise the character of this school to a height which, seeing it only in the labours of the present professors, can hardly be estimated. Witness what Edinburgh has done, being a capital. Its professors were not all formed there. The celebrated Black was a professor in Glasgow. Dr. Cullen, to speak whose eulogy would be super-

fluous here, was also a professor in Glasgow, and his reputation was high, as a teacher, before he was drawn to Edinburgh. The elder Gregory was professor in the College of Aberdeen. The present celebrated professor of chemistry in Edinburgh was also drawn from another University; and Dr. Chalmers, the ornament of the Scottish church, was professor in St. Andrew's before he was appointed to his present chair.

Here, then, (said Mr. Bell) you see the attraction which learned men have to the seat of learning; and so, with the thousand greater attractions of London, this University, once established, and the Council which watches over it, will have a more extensive patronage over learned and ingenious men, than ever fell to the lot of any similar society.

But looking to the immediate interests of the students—putting aside the well-ordered courses of study, which nowhere besides in this country can they command—the combination of classes under the same roof, and the provisions for private study in the intervals of lecture—what is it that attracts the attention of a well-educated youth out of the University? That which should confirm him in his best resolutions, and strengthen his highest aspirations. To see to what dignity great talents highly cultivated raise a man, in a free state—to see the eminence of our Judges, or to witness the force of eloquence in the Courts—by these an indelible impression must be made upon his mind of whatever is truly excellent and worthy of imitation. Or he takes another course: Let him visit the hospitals, and learn, perhaps, what course of life will best accord with his sense of duty and virtue. He may see that in the office of the physician there is a nearer correspondence with what religion and humanity dictate, than in any other profession—a course of life always respectable, which will at no time want interest, and which will appear the more honorable the nearer he approaches to the end of life.

The next division of the lecturer was occupied in giving an account of the Medical School: and he contrasted the necessity of a complete system of medical education, with the entire devotion to surgery, which is remarkable in some other schools. He concluded with the following address to the students:—

"And now let me address a very few words to those younger gentlemen, who, to use the French phrase,—*assist* at the lectures delivered here. It requires not the use of the major and minor proposition to demonstrate that we cannot do without them. But in declaring the students a constituent part of this University, let me remind them how much depends on them. I shall not point out to them a selfish view, by declaring their own interests involved, and the happiness of every one dear to them: I shall merely state to them that there is a more manly and inspiring object which we expect to move them.

"I fear it cannot be concealed that there are some, a very few, whose prejudices are morbid, and desperate, beyond hope, to whom it would prove no disappointment if all that has been done for education in this place were to prove abortive. No sign of this would be seized upon with more reckless and mistaken zeal than any thing like incorrectness in the conduct of the students. I beg of you therefore individually to consider, that you are embarked in a great measure, which gives the most lively anticipations of high national advantage, and that even by the misconduct of the least of you that hope may be disappointed; that just as there are many great and good men prepared to hail with acclamation every successful student, so must their disapprobation and their disappointment be strongly felt, if misconduct should injure this young establishment.

"But let me again say, that neither Professors nor Students have ground for any such fear; on the contrary, every thing declares the permanency of the benefits which this University is capable of conferring. And we must carry ourselves here as in Ancient Rome, where it was regarded as the mark of a good Citizen never to despair of the fortunes of the Republic."

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, Esq. F.R.S.

LECTURE I.—Oct. 1st.

[The theatre was crowded to excess, and Mr. Lawrence was greeted on his appearance

with all the enthusiasm which pupils usually shew towards an eloquent and favourite teacher.]

GENTLEMEN,

AFTER teaching anatomy and surgery for upwards of forty years in this hospital, and I believe never failing once during that period to open the course of winter lectures on the 1st of October, Mr. Abernethy is no longer able to continue those labours which have raised the medical school of this hospital to so high a reputation, and contributed so signally to elevate and advance the profession of surgery. The strength of intellect which distinguished our great teacher was manifested at an early period of his career. He began to teach his profession at a time when others are usually employed in learning it—that is, at the expiration of his apprenticeship. Soon after, he presented the world with those essays which placed his name in the first rank of physiologists. The original train of thinking, and the great talents for observation, which he evinced at this early period, gave birth to anticipations which subsequently were fully realized. His very high character, both as a writer and a teacher, is so well known, and so generally appreciated, that I need not enlarge upon the subject—particularly in this theatre. I will take this opportunity, however, of saying that we may ascribe to him the great merit of having been the first to introduce a more general and scientific investigation of the principles of surgical science. He was among the first in this country to assert the rank of surgery. He taught us to raise our views beyond the narrow limits of local disease. He has been regarded on this account as a kind of intruder on the province of physic, and as having entertained a wish to make surgeons—physicians. If it be meant by this charge to accuse him of entertaining a wish that surgeons should add to their surgical knowledge that of medicine, the accusation is just, and in my opinion does him great credit. By inducing surgeons to study medicine generally, and thus reuniting two separate parts of one great subject, he has at the same time signally benefited the public, and conferred honor on his own profession.

The departments of Anatomy and Surgery, which were held conjointly by Mr. Abernethy, are now undertaken separately by Mr. Stanley and myself. It will be our business to keep steadily in view the example of our great predecessor. However far behind him we may be in the powers of acquiring and imparting information, we will not acknowledge any inferiority in one respect—that of an earnest desire to render ourselves useful to our pupils (*cheers*), and of holding a firm determination to discharge

the duties we have undertaken to the best of our ability. This change, however, will make some alteration necessarily in the arrangement of the lectures. When Mr. Abernethy undertook both departments, he could distribute the subjects as he pleased between the two courses: he found it convenient, or thought it expedient, to introduce a considerable part of the subject of Surgery into the Anatomical Lectures. When I say a considerable part, I might say one-half or two-thirds, including the performance of operations, and the states in which such operations are necessary,—the diseases of the bones,—the accidents to which they are liable;—the injuries and diseases of the joints,—and many other subjects. We shall allot to each department the diseases which properly belong to it; and as I purpose to go through the whole of Surgery, it will not be practicable for me to give you two courses of lectures. We shall find that the subjects are so extensive and so numerous, that they will fill one course, lasting through the whole of the winter. I purpose to lecture on Surgery three times a week; and I conclude that this arrangement will allow sufficient time for including every thing that belongs to the course. In the prosecution of this design, I shall commence at seven o'clock to-morrow evening with the proper business of these lectures.

Surgery is one division of the science and art which have disease for their object. The science, considered generally, embraces the physiological history of man. It investigates, in the first place, the construction and living actions of the human frame. It inquires into the purposes executed by each part of the body, and into the general result of their combined operations. It surveys the human organization under all the various modifications which are impressed upon it by surrounding influences, and draws from these several sources the rules to be employed in preserving health and removing disease. The practical application of these rules constitutes the art of healing, or rather of treating diseases: for in many cases we are unable to heal, and do not even attempt it. The assemblage of facts and reasonings on which these rules are grounded constitutes one science; and the boundaries of surgery have not hitherto been, nor perhaps can they be, accurately defined.

For my own part, I take the word surgical in the common acceptation, understanding it to include injuries of every description,—all the external local diseases,—such internal diseases as produce changes recognisable externally—such as require in their treatment topical operations and manual proceedings.

The subjects I have just enumerated form the catalogue which is treated of in the surgical writings of Mr. Sam. Cooper. It is of the

same kind of subjects that Boyer and ~~W~~pech treat, when speaking of external diseases. The title adopted by the latter is, "Treatise on Diseases reputed or considered to be Surgical."

There has been as much difficulty experienced in France as in this country, in defining the limits between the two professions. I am convinced that the boundary, as now fixed, is not very clear, and the consequence is, that great disputes have arisen. Operations, injuries, and external local complaints, are the undisputed possession of surgery, and internal diseases are assigned to the physician. But it is not easy to distinguish between external and internal diseases; here in fact surgery and physic join. Since it is found thus difficult to draw a satisfactory line of demarcation between physic and surgery, you will not be surprised to find, in a great majority of instances, that both are practised together in this country by one description of persons, surgeon-apothecaries. Nineteen-twentieths of diseases are under the care of this class of persons in the country, who are therefore styled general practitioners. On the other hand, in the metropolis, we find that these two branches of the profession are exercised by a different class of persons, whose education differs widely in some important points. We find it taught by separate teachers, in distinct courses of instruction; and we find this regulation enjoined by the laws of two distinct incorporated bodies.

Finding these contradictions, we are led to inquire more particularly into the distinctions between physic and surgery—to ask whether it consists in the nature of the disease allotted to each, or in the mode of treating it—to inquire whether there is any difference in the mode of learning them—to ask how and when the distinction originated, whether it is well founded, whether it is of any benefit to the public or any advantage to the practitioner? Nothing like the modern distinction was known to the ancients; at least we find no traces of it in the Greek, Roman, or Arabian writers. Particular branches of medicine were, indeed, followed separately in Egypt, where the diseases of the eye, and some internal organs, formed the distinct occupation of different practitioners; and a distinction somewhat similar is said to have prevailed at Rome. But Hippocrates, Galen, and Celsus, treat of the nature and management of fever, of injuries, and of external and internal complaints in common. Celsus, in speaking of the treatment of diseases, distributes what he has to say under three divisions, the same as are this day employed—*διατηρητικη*, *φαρμακευτικη*, and *χειρουργικη*—according as the treatment is to be accomplished by dietetical, pharmaceutical, or surgical means. But the idea of splitting medicine into two

parts, and learning the practice separately, seems never to have been entertained by this writer, nor any other great author whose name is still regarded as authority.

In the long night of barbarous ignorance which intervened between the downfall of the Roman empire and the revival of learning in the West, the treatment of diseases was preserved by the ecclesiastics. The exercise of medicine harmonized well with the more immediate object of their calling. But when the Council of Tours had declared—*ecclesias abhorret a sanguine*—that the church was defiled by blood, the priests and monks could no longer use any of those means that involved the loss of blood, and the practice was taken up by infidels and itinerants. In the course of time, surgery, which then consisted merely of bleeding and tooth-drawing, fell into the hands of a few persons who practised these in conjunction with the trade of the barber, and which ultimately led to the incorporation of the barbers and surgeons into a company. This separation of surgery from that medical knowledge which is an indispensable guide to its proper application, and its union with the art of the barber, long survived the circumstances that gave rise to it. It continued in this country till the middle of the last century, when it was dissolved in the reign of George II. The combination of the two branches still remains in many parts of Europe.

In order to determine whether there is any real ground of distinction between physic and surgery, it is necessary to advert to the general practice of both. The individual organs which make up the human body, although various in their structure and office, are all intimately connected with, and dependent upon each other. They are subordinate parts of one great machine, and all concur in one common object—the life of the individual. All the leading arrangements are calculated to give a character of unity to the organic and living actions of the body. There is one source of nutrition of the whole frame; there is one centre of circulation; there is a common place of union of all senses and volition—a common centre of nervous energy. The various organs are not only intimately connected but act on each other by a mysterious, or at least hitherto unexplained cause which is denominated sympathy. Every part composing our frame acts dependently; all the parts are immediately or remotely connected; and hence you could form no adequate idea of the sympathies of the organs if you insulated them from the rest any more than you could estimate the use and action of a single wheel or lever detached from a watch or steam engine. As a united machine, though complicated, is essential to accomplish the end for which it is formed, so living actions, although numerous and intricate, form an

indivisible whole. Hence there is one anatomy and one physiology, and there can be only one pathology. If you wish to understand any part, you must not only examine the part itself but must survey the whole. In the same way, if you wish to investigate disease, you must observe not only the local affection, but the influence that other parts may exert over the seat of the complaint.

It must be the first business of the medical student to examine the structure and living actions of the frame; that is, to study man in a state of health. These are the objects of the two sciences, which are denominated Anatomy and Physiology. He then proceeds to observation. He notices the circumstances under which disease arises; he watches its progress, and its termination; he explores the organic changes it produces after death; and learning to connect these with the appropriate external signs by which the disease is accompanied, and deriving from these comparisons the means of ascertaining the exact seat of the disease, he is able to foretell its course and termination. This forms the subject of two other branches, which are distinguished by the names of Morbid Anatomy and Pathology. Morbid anatomy is opposed to anatomy; pathology is opposed to physiology. Anatomy regards the healthy structure; morbid anatomy the diseased one. Pathology regards the diseased functions; physiology those that are healthy. The student is now prepared to apply the external influences, such as diet, climate, exercise, the outward or inward remedies, or the surgical operations which may be necessary for the removal of disease, and the restoration of health. The real question relative to the distinction between physic and surgery, then, comes to this: after treating disease generally, in the way just mentioned, can you discover any portion of it insulated from the rest? Can you find out any division that can be undertaken without a reference to other parts? Can you divide the subject of disease into two classes that may be treated in a different manner? Certainly not. The structure and functions are universally connected; no part is independent. The causes that constitute disease are often to be found, not in the part itself, but in a remote portion of the frame; the means of cure are seldom to be applied actually to the part diseased: for instance, if a person has a gouty inflammation of the toe, no cause of disease can be ascribed to the part itself; but if you examine the state of the individual, you will find a full and strong pulse, and other marks indicating a fulness of habit, or plethora, as it is called; the tongue will indicate a disorder in the digestive organs, and your treatment must consist in adopting the means necessary to remove the fulness of habit, and to correct the digestive organs, and the patient goes on well without

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indivisible whole. Hence there is one anatomy and one physiology, and there can be only one pathology. If you wish to understand any part, you must not only examine the part itself but must survey the whole. In the same way, if you wish to investigate disease, you must observe not only the local affection, but the influence that other parts may exert over the seat of the complaint.

It must be the first business of the medical student to examine the structure and living actions of the frame; that is, to study man in a state of health. These are the objects of the two sciences, which are denominated Anatomy and Physiology. He then proceeds to observation. He notices the circumstances under which disease arises; he watches its progress, and its termination; he explores the organic changes it produces after death; and learning to connect these with the appropriate external signs by which the disease is accompanied, and deriving from these comparisons the means of ascertaining the exact seat of the disease, he is able to foretell its course and termination. This forms the subject of two other branches, which are distinguished by the names of Morbid Anatomy and Pathology. Morbid anatomy is opposed to anatomy; pathology is opposed to physiology. Anatomy regards the healthy structure; morbid anatomy the diseased one. Pathology regards the diseased functions; physiology those that are healthy. The student is now prepared to apply the external influences, such as diet, climate, exercise, the outward or inward remedies, or the surgical operations which may be necessary for the removal of disease, and the restoration of health. The real question relative to the distinction between physic and surgery, then, comes to this: after treating disease generally, in the way just mentioned, can you discover any portion of it insulated from the rest? Can you find out any division that can be undertaken without a reference to other parts? Can you divide the subject of disease into two classes that may be treated in a different manner? Certainly not. The structure and functions are universally connected; no part is independent. The causes that constitute disease are often to be found, not in the part itself, but in a remote portion of the frame; the means of cure are seldom to be applied actually to the part diseased: for instance, if a person has a gouty inflammation of the toe, no cause of disease can be ascribed to the part itself; but if you examine the state of the individual, you will find a full and strong pulse, and other marks indicating a fulness of habit, or plethora, as it is called; the tongue will indicate a disorder in the digestive organs, and your treatment must consist in adopting the means necessary to remove the fulness of habit, and to correct the digestive organs, and the patient goes on well without

any application to the toe. Another person may have a paralytic affection of his finger, and you can discern no cause for it in the part itself; you will find every thing in the paralyzed member perfect as to structure; but on examination, you find disease existing in the head; you take the means of allaying that disease, and then the paralyzed parts recover the power of motion. In many cases, disease originating in one part affects a great many other organs of the body; and very often the secondary disease thus produced attracts more attention than the original complaint itself. A person has an affection of the head, which may be produced by various causes, and within a short time, the circulating system, the digestive organs, and the secretions, become deranged, and he is in a state of continued fever,—another individual receives an injury,—inflammation is set up in the part, and in a short time the same febrile disturbance arises. The patient has a sympathetic fever in both cases, and the latter disease seems of more consequence than the former. Again, although individual organs are numerous, the components of organic structure in the body are few; the different proportions in which they enter into the composition of parts, is what makes the difference, just as the combinations of a few letters give the infinite variety of words. When you have arranged and divided the causes of disease into two halves, you may give those different names, and require that they should be practised by different individuals, but the two divisions that you establish will be like each other, and the cause and the treatment of disease will in both cases be exactly similar. If you will insist on a distinction, it must be arbitrary. Then you can establish it clearly. You may divide diseases into those of the right side and of the left, or into those of the upper and lower halves of the body.

To assert that surgery and physic are essentially distinct, would be to say that there are two descriptions of pathology—that the external and internal parts of the body were to be treated on different and distinct principles. When you reflect that the primary tissues composing the various organs of the body are the same throughout, and that the difference consists solely in the number and proportions of those tissues, you will see that the various parts of the body cannot alter the nature of the disease, though perhaps there may be a difference in the mode of its treatment;—the way in which it is to be carried into force may be varied, because local applications may be made to the external parts which cannot be done to those that are internal. We treat the disease in the same manner, whether it is in the eye, the breast, the testicle, the heart, the lungs, or the liver. The princi-

ples of pathology, therefore, are general; they are the same in all parts of the body; and they must be common to the physician and the surgeon. Hence we may say, as Mr. Abernethy has most justly done, that surgery and physic, considered as objects of scientific information, are one and indivisible. We may with great propriety affirm that no single branch of medicine can be acquired except by those who have studied the structure of the whole frame.

By those who are inclined to defend existing distinctions, various views have been taken as to the ground on which they ought to rest: for example, external diseases have been referred to the surgeon; those that are internal to the physician. But, unfortunately for this distinction, nature has connected the outside and the inside of the body so closely that it is impossible to say where the one terminates and the other begins. If we were to adopt this distinction we should consider how far the exterior of the frame extends, and how far the province of the surgeon is to go; whether it is to extend half an inch into the body or an inch? What is the boundary of the internal cavities and of the external outlets: for example, those lined with mucous membrane? The distribution of disease between the physician and surgeon seems to be absurd. The surgeon is allowed to take care of the diseases of the mouth: where, then, is he to stop? Inflammation of the throat, arising from syphilis, is referred to the surgeon—catarrhal inflammation to the physician; polypus of the nose is assigned to the surgeon—a coryza of the same part is entrusted to the care of the physician. The diseases of the bones and of the joints have been considered a part of surgery, and yet they are hardly to be called external parts. In hernia and aneurism there is an external tumor, but they are produced by the diseases of parts that are quite internal. When we come to consider the cause and nature of disease, the absurdity of the distinction becomes more apparent, and the indispensable connexion between particular parts of the frame more obvious. External diseases are often produced by internal causes, as erysipelas, nettle-rash, gout, &c.; and on the other hand, external agents produce inward disease, as in rheumatic inflammations and catarrhal affections, from exposure to cold. The eye, considered as an external part, has been entrusted to the surgeon; yet that organ is the most complicated in the body, and is subject to so great a number of diseases, that it requires a greater knowledge of the principles to be derived from general pathology and therapeutics than any other part. The eye, together with its appendages, not only contains mucous, serous, fibrous, and glandular structures, parts peculiarly liable to disease, but it suffers from gout, rheumatism, small-pox, scar-

let fever, and measles: it is affected by scrofulous and syphilitic inflammation; by cancer, fungus hæmatodes, and melanosis. If, then, an organ so complex in its structure, and subject to such numerous diseases as the eye, can be safely entrusted to the care of a surgeon, I am at a loss to know why any distinction should be made so far as disease goes between surgery and physic. It is in vain to establish distinct professorships for external and internal pathology, that surgery and physic should be taught by distinct lecturers, and in separate courses of instruction. Neither lecturers nor authors can make the distinction, and thus we find the same diseases are often considered by both; they are treated on the same general principles, and regarded in the same manner. Again, local diseases have been given to surgeons, and general ones to the physician. It really may be a matter of question, whether there be any local or general diseases, in the strict sense of the terms. When an organ of little consequence in the animal economy is slightly diseased, no sensible effect may be produced beyond the part itself; but when an important organ is considerably affected, then a great number of other parts feel its influence: hence arise general or constitutional diseases. Even in fevers we can trace the general affection to some particular organ; and the existence of fever as a general disease, independent of primary local mischief, may be made a matter of doubt. Thus, the distinction of local and general disease consists in degree, and not in kind:—it is a question of more or less. If you were to arrange diseases in one column, beginning at the most local, and ending at the most general, you would find them passing insensibly into each other, without any marked separation.

It has been recommended that Surgery should be confined to cases that require manual proceedings, or operations of some kind. This notion seems to be just worthy of that ignorance to which the unnatural separation owed its origin, and of the dark period in which it occurred.

According to such views, the distinction would depend not on the difference in the treatment of diseases, but on the accidental and often varying circumstances of the mode by which the object is to be accomplished. What shall we do with the numerous cases, such as affections of the head, gout, and rheumatism, in which changes of diet and internal treatment are necessary, in conjunction with the manual proceedings of bleeding, cupping, and leeching? What shall we do with the numerous cases, such as hernia, retention of urine, &c. which, after various internal remedies, are often followed by surgical operation? In many

cases, it is a question of degree, whether internal remedies only shall be employed, or surgical operation shall be added. If it is meant to confine surgery to operations or manual proceedings, and to a merely mechanical department of the profession, I for one must enter my strongest protest against such an arrangement. I should really feel myself degraded by exercising this kind of barber surgery. If this arrangement were carried into effect, it would not be necessary to study scientific principles. We might spare ourselves the toil and trouble of learning anatomy, physiology, and pathology, altogether; we might be contented to resign our profession into the hands of barbers, its original founders.

Historically speaking, we cannot deny that surgery originally consisted of this mechanical and subordinate part of the profession, which was practised by the permission, and under the sanction, of physicians. But surgeons have long since emancipated themselves from this bondage, and surely they will not again submit to such degrading trammels. They have cultivated with ardour and success the scientific department of the art; they can appeal to the great progress which surgery has made since the middle of the last century, and to the present state of its progression. The good opinion of the public which they have secured is not inferior to that of other scientific men. They can point in the annals of medicine to the names of men, who have been the most signal contributors to the advancement of medical science. Among these I would not omit to mention the name of the illustrious Pott. He was equally distinguished as an able practitioner and a clear and elegant writer. I must, however, confess that he has been thrown into the shade by the transcendent merits and more brilliant talents of his contemporary and rival, John Hunter. In contemplating this extraordinary character, we are at a loss to discover whether he surpassed others most in his energy or his genius. The novelty of his views and the splendour of his discoveries excite our admiration, and we are lost in astonishment when we enter his museum and view the treasures there accumulated. We can hardly believe that they could have been brought together by one individual. To this name must be added that of a kindred spirit who entered with ardour into the path traced out by his great predecessors, and followed it into new regions of knowledge. I allude to the founder of this school, Mr. Abernethy, (cheers). Fellow labourers have not been wanting in France, Germany, and Italy. It will be enough for me to allude to the names of J. L. Petit and Desault; to

Richter, Bichat, and Scarpa. The two latter have been among the most distinguished writers of modern times.

The attempt to reduce surgery to its former limits, to bring it back to the art of bandaging, bleeding, tooth-drawing, and so on, which constituted almost its entire encyclopædia in the venerable times of barber-surgery, if it could be effected would be no less injurious to the profession than to the public. The proposal now comes a century too late. In those cases in which local injury or disease exists in conjunction with a more or less general derangement, as in compound fracture with fever, in erysipelas, and in strangulated hernia, the patient requires to be attended by a person who thoroughly understands the case in all its bearings. The surgeon who only knows the local, and the physician who understands only the general treatment of cases, are but half informed, and surely deserve less confidence than one who understands both. The confidence which ignorant persons are inclined to repose in what they call a combination of talent, is fallacious, if it consists of a surgeon who knows nothing of general, and a physician who knows nothing of local management: this is not a case, like that of grammar, where two negatives make an affirmative.

Let me take this opportunity of mentioning to you, that the mere performance of an operation is often the least part of a surgeon's duty, even in cases that require it. To judge whether or not the disease admits of cure by other means, to perceive when an operation becomes advisable, to determine when it is necessary, to prepare the patient judiciously for its performance beforehand, and to manage the case well afterwards, are points of superior importance.

Do not let it be supposed that I speak lightly of operations; on the contrary, it is necessary for you to study carefully each part of your duty; but I wish to caution you against attaching too much importance to the branch of surgery that you will most seldom be called upon to exercise. It is a great mistake to suppose that a surgeon is always employed in operating, however extensive his practice. It is the boast of modern Surgery to have diminished the number of operations. I speak within limits when I assert that there are not so many operations performed now, by one-half or two-thirds, as when I first began to study the profession. This important difference to which I allude has arisen from the improved knowledge of the nature and treatment of disease. Thus, whatever view of the subject we take, the same conclusion forces itself on our minds, viz. that there is no natural distinction between physic and surgery: they are inseparably connected parts of one science and art,—the practical

principle of both having the same foundation, the different branches must employ the same means, because they have the same purpose to accomplish. Thus the great distinction turns out at last to be purely artificial—to be founded on no fixed principle—to be dependent on nothing but custom.

I have a few observations to address to you respecting the mode of studying the profession generally. Anatomy and physiology constitute the basis of all rational medicine. Doctrines which will not bear examination by this test, are merely to be regarded as idle dreams. No one would think of attempting to repair a watch or clock, or other piece of machinery, unless he understood its construction—unless he was acquainted with the nature of its movements and its connexions, and the immediate actions of the several parts: yet you find persons continually endeavouring to remedy the disorders of the human frame, not upon a slight knowledge of its construction, but in total ignorance of it, although it is a piece of mechanism more intricate than any of human contrivance.

Not only are anatomy and physiology the ground-work of medical science, but a correct knowledge of anatomy is absolutely necessary and essential to the surgeon, in the exercise of his daily duties. Without it he cannot determine the seat of the disease; he cannot understand the form and nature of the injury or accident; such as dislocations and fractures, wounds of the blood vessels, and other internal parts; nor can he proceed without great risk to the safety of the patient. You will, perhaps, be inclined to ask me how much knowledge of anatomy is necessary for a surgeon? The answer is short—just as much as he can get. Your study of anatomy must be general; no part can be excepted, unless you can point out some portion that is never liable to accident, and can never be the seat of surgical operation. In such case you can omit it. Operations may, sometimes, be performed without mischief by one ignorant of anatomy: but if any thing unexpected should occur, such an operator perhaps becomes confused, embarrassed, and frightened. In general, unless the knife be guided by anatomical knowledge, you cannot operate without great danger to the patient and great hazard to your own reputation.

I trust you will never be anxious to discover with how small a stock of scientific information you may be able to carry on the trade of your profession. Your more honourable aim will be to render yourselves correct anatomists, as a most essential step towards becoming good surgeons. The health, the limbs, the lives of your fellow-creatures, are entrusted to your care: with the greatest

skill, our utmost exertions will not do more than enable us to undertake the responsibility. What kind of a conscience can that man possess who will plunge a knife into the body of a fellow-creature without a knowledge of the parts which he divides? Who can undertake an operation without that scientific acquaintance with his art which will enable him to meet every emergency? and what must be his feelings if serious and permanent injury, or loss of life, should be the consequence of his ignorance or his rashness?

Anatomy and physiology, however, do not teach us disease. We may understand the functions of healthy structure perfectly, and yet know nothing of its morbid conditions. How then is this to be learned? Not from lectures, nor from reading—but by resorting to the book of nature. You must frequent the hospitals and the sick chamber, and you must there observe disease for yourself. Lectures and books are auxiliaries, and, under certain circumstances, very valuable ones, but they are only of secondary importance, when compared with actual observation. In order to know disease, you must see and carefully examine patients. You must watch the progress of the symptoms during life, and must explore after death the change of organization produced by disease. And here your anatomy and physiology will render you the most eminent service. How can you know the altered function, or the organic changes which are produced by disease, unless you are acquainted with the natural structure and healthy functions of the body? The wards of an hospital are the best school for studying disease; and clinical instruction, under the guidance of competent teachers, the best mode that can be adopted of acquiring information. You may be inclined to inquire whether it is not necessary to attend lectures, and read books, before you begin to see patients. I advise you to resort to nature as soon as possible. There is the same difference, in point of knowledge, between a person that has simply perused the description of a foreign country, and another who has actually visited it, as between a student who has read of disease, and one who has witnessed it. In order, however, to combine these advantages to the fullest extent, instruction must be strictly clinical, that is, disease must be pointed out and demonstrated on the patient. It is clear that clinical instruction of this kind can only be given at the time of the visit; and I have always endeavoured to do this. Those gentlemen who attended the school last winter must be aware that the lectures of Mr. Earle were of great value. He is sensible, however, they did not supersede the necessity of instruction at the bedside of the patient, which also he adopted.

Books and lectures enable the student to observe for himself, and are of great assistance in pointing out what might otherwise have escaped his notice. It does appear to me, however, that too much importance has been attached to lectures: the long habit of attending them has led to a belief that medical science can be learnt from them alone; but this is a great mistake. The most valuable part of the science rests on observation, and can only be acquired by resorting to it. It prevents the student from speculating, and keeps him to plain matters of fact. The importance of lectures, as I have said, has been over-rated, and the regulations of our public bodies, which require certificates of having attended certain courses of instruction, have tended to keep up the false impression.

Proceeding in natural order, you will attend, in the first place, to external diseases; after which you will proceed to study internal affections. In the former, the origin and progress of disease are obvious to the senses, and the evidences and principles which are derived from these sources must be applied to the more obscure affections of internal parts. Hence a physician should begin with surgery; and he who makes himself a good surgeon has done much for what is necessary to become a good physician; but do not suppose that a knowledge of surgery alone will enable you to practise physic. Your study of disease should be general; it should embrace the whole range of the subject. To the great majority of you who will have to act as general practitioners, this is obviously necessary. You will scarcely meet with two cases in a hundred which are exactly similar. Those who mean to practise surgery alone, and who, I suppose, would wish to be denominated pure surgeons, as a mark of superior dignity, would not probably be willing that, in their higher station in the profession, their portion of knowledge should be more limited than that of the general practitioner. Moreover, a learned surgeon—one who possesses a thorough acquaintance with anatomy, physiology, and pathology—will constantly be consulted under all circumstances, more particularly in cases of obscurity, difficulty, and emergency. What will be the thought of him, if he should be obliged to say that he has not studied this part, or is ignorant of that; and that a physician or an apothecary ought to be consulted? Will he allow it to be stated that he feels incompetent to manage such a case? What can he expect but to lose the confidence of those to whom his ignorance is professed, and in whose estimation he must be ranked beneath the general practitioner?

I do not advise you to trouble yourselves with a great many books at the beginning. I think the Elementary Works of Mr. Samuel

Cooper will be sufficient at first, and you may soon add to these the writings of Mr. Pott and those of Mr. Abernethy, particularly his work on the Constitutional Origin and Treatment of Local Diseases.

To those who wish to become thoroughly acquainted with the profession of Surgery, I recommend the acquirement of a knowledge of Latin, French, and German; for there are numerous sources of information in these languages.

You will understand, from the observations I have now had the honour of addressing to you, that in selecting the medical profession you have not undertaken an easy task. Indeed the study of medicine is arduous and difficult, and the most comprehensive mind and the greatest industry may find it occupy them for many years to bring up their knowledge to the present state of science. I must, however, at the same time observe, that among all the objects which engage the attention of the human mind, I know of none more agreeable than the study of medicine and surgery; while the practice of it has a most salutary moral tendency,—that of repressing selfishness, and ennobling all the social feelings. The medical profession embraces the most interesting parts of knowledge. Our first step is to learn the construction of our own frame, the mode by which we live, and move, and have our being—the means and operations by which health is interrupted and restored—by which pain and suffering are avoided.

Chemistry, natural philosophy, and natural history, are auxiliary means connected with our objects; for we are engaged in the study of nature and investigation of truth. We are not called upon to uphold doctrines or systems, nor to defend any particular set of opinions. We have no interests at variance with those of the community.

In our professional intercourse with our fellow-creatures, we are only known as the instruments of good in removing pain and sickness, the greatest of all evils; and in restoring health, the greatest of all blessings; in soothing the acute anguish which relations and friends feel for each other; and in protracting the arrival of that awful moment from which all shrink back with dread. The question of life and death often hangs on our decisions. I trust that bearing in mind these serious duties, you will eagerly embrace every opportunity of gaining that knowledge which will enable you to discharge them faithfully and efficiently. You will thus become respected members of an honourable profession, and you will enjoy in the decline of life the sweetest of all rewards—the retrospect of labour devoted to the good of others.

NEW REGULATIONS OF THE SOCIETY OF APOTHECARIES.

Regulations to be observed by Students whose attendance on Lectures commenced before January 1st, 1829.

The Court of Examiners chosen and appointed by the Master, Wardens, and Assistants of the Society of Apothecaries, of the city of London, in pursuance of a certain act of parliament, “for better regulating the practice of Apothecaries throughout England and Wales,” passed in the fifty-fifth year of the reign of his Majesty King George the Third, apprise all persons whom it may concern:

That every candidate for a certificate to practise as an apothecary, will be required to possess a competent knowledge of the Latin language, and, in compliance with the fourteenth and fifteenth sections of the said act, to produce testimonials of having served an apprenticeship of not less than five years to an apothecary, of having attained the full age of twenty-one years, and of good moral conduct.

Candidates will also be required to produce testimonials of attendance on lectures and medical practice agreeably to regulations at different times published by the Court.

Those whose attendance on lectures commenced prior to the 1st of February, 1828, will be admitted to examination after an attendance on one course of lectures on chemistry, one course of lectures on Materia Medica, two courses of lectures on Anatomy and Physiology, two courses of lectures on the Theory and Practice of Medicine, and six months physician's practice at an hospital, or nine months at a dispensary.

Those who began to attend lectures subsequently to the 1st of February, 1828, and previously to the 1st of October in the same year, will only be admitted to examination after the following course of study—viz. an attendance on one course of lectures on Chemistry, one course of lectures on Materia Medica and Botany, two courses of lectures on Anatomy and Physiology, two courses of lectures on the Theory and Practice of Medicine—to be attended subsequently to the lectures on Chemistry and Materia Medica, and to one course at least of Anatomy—and six months, at least, physician's practice at an hospital, or nine months at a dispensary; such attendance to commence subsequently to the termination of the first course of lectures on the Principles and Practice of Medicine.

Those whose attendance on lectures commenced on or after the 1st of October, 1828, and previously to the 1st of January, 1829, will be required to produce testimonials of

having attended two courses of lectures on Chemistry, two courses of lectures on Materia Medica and Botany, two courses of lectures on Anatomy and Physiology, two courses of Anatomical Demonstrations, two courses of lectures on the Theory and Practice of Medicine—to be attended subsequently to one course of lectures on Chemistry, Materia Medica, and Anatomy—and six months, at least, the physician's practice at an hospital (containing not less than sixty beds), or nine months at a dispensary: such attendance to commence subsequently to the termination of the first course of lectures on the Principles and Practice of Medicine.

Regulations to be observed by Students whose attendance on Lectures commenced since January 1st, 1829.

The Court of Examiners chosen and appointed by the Master, Wardens, and Assistants of the Society of Apothecaries, of the city of London, in pursuance of a certain act of Parliament, "for better regulating the practice of Apothecaries throughout England and Wales," passed in the fifty-fifth year of the reign of his Majesty King George the Third, apprise all persons whom it may concern:

That every candidate for a certificate to practise as an apothecary, will be required to possess a competent knowledge of the Latin language, and, in compliance with the fourteenth and fifteenth sections of the said act, to produce testimonials of having served an apprenticeship of not less than five years to an apothecary, of having attained the full age of twenty-one years, and of good moral conduct; and also testimonials of having attended two courses of lectures on Chemistry; two courses of lectures on Materia Medica, Therapeutics, and Botany; two courses of lectures on Anatomy and Physiology; two courses of Anatomical Demonstrations; two courses of lectures on the Theory and Practice of Medicine—to be attended subsequently to one course of lectures on Chemistry, Materia Medica, and Anatomy; two courses of lectures on Midwifery and the Diseases of Women and Children; and nine months, at least, the physician's practice at an hospital (containing not less than sixty beds), or twelve months at a dispensary: such attendance to commence subsequently to the termination of the first course of lectures on the Principles and Practice of Medicine.

Students are, moreover, earnestly recommended to attend Clinical Lectures, and diligently to avail themselves of instruction in Morbid Anatomy and Forensic Medicine.

The examination of the candidate will be as follows:

1. In translating grammatically parts of the Pharmacopœia Londinensis, and physicians' prescriptions; and after the 1st of

January, 1831, candidates will be required to translate portions of the following medical Latin authors—viz. Celsus de Medicinâ, or Gregory Conspectus Medicinæ Theoreticæ.

2. In Chemistry.

3. In Materia Medica and Therapeutics.

4. In Botany.

5. In Anatomy and Physiology.

6. In the Practice of Medicine.

N.B.—Physicians' pupils, who intend to present themselves for examination, must appear personally at the Beadle's office, in this Hall, and bring with them the tickets, authorizing their attendance on such practice, as the commencement thereof will be dated from the time of such personal appearance.

No testimonial of attendance on lectures on the Principles and Practice of Medicine, delivered in London, or within seven miles thereof, will render a candidate eligible for examination, unless such lectures were given, and the testimonial is signed by, a fellow, candidate, or licentiate, of the Royal College of Physicians of London.

Notice.—Every person intending to qualify himself under these regulations, to practise as an apothecary, may obtain, at the Beadle's office, at this Hall (where attendance is given every day, except Sunday, from nine until two o'clock), a printed form of certificate of all the lectures candidates are required to attend, and also of the physician's practice. The Court requests the blanks may be filled up when signed by the respective Lecturers and Physicians whose lectures or practice the student has attended.

Students are enjoined to observe, that, in future, these certificates, so filled up, will be required from candidates for examination, and that no other form of testimonials of attendance on lectures and medical practice will be admitted, except such certificates as have heretofore been received, if the same were obtained prior to the 1st of February, 1828; or such as bear the seal of a University or College, and the signature of the officer attached to such University or College whose duty it is to sign certificates of attendance on the lectures given therein.

Every person offering himself for examination must give notice in writing, to the Clerk of the Society, on or before the Monday previously to the day of examination; and must also, at the same time, deposit all the required testimonials at the office of the Beadle.

The Court will meet in the Hall every Thursday, where candidates are required to attend at half-past four o'clock.

By order of the Court,

JOHN WATSON, Sec.

London, Sept. 1, 1829.

For information relative to these regulations, medical students are referred to Mr. Watson, who may be seen at his residence,

49, Berners'-Street, between the hours of nine and ten o'clock every morning (Sunday excepted); and for information on all other subjects connected with the "act for better regulating the practice of apothecaries," application is to be made to Mr. Edmund Bacot, Clerk of the Society, who attends at the Hall every Tuesday and Thursday, from one to three o'clock.

It is expressly ordered by the Court of Examiners, that no gratuity be received by any officer from any person applying for information relative to the business of this Court.

HOSPITAL REPORTS.

ST. THOMAS'S HOSPITAL.

Case of Extensive Sloughing of the Genitals.

MARIA CARTER, æt 18, a healthy looking girl, fresh coloured, and of sanguineous temperament. Admitted into Magdalen's Ward, under Mr. Tyrrel, Sept. 9th, 1829; states that she has been leading a disorderly sort of life, drinking a good deal of spirits, especially gin, and some porter; has lately been residing in a confined district (Norfield), close to the water side. There is very extensive inflammation, attended with great swelling, about the external organs of generation. The inflammation reaches as high up, in front, as the navel, and behind as high as the small of the back; it is of livid colour, with small vesicles in different parts, containing a limpid fluid. Constitutional symptoms high; pulse quick, 112 in a minute; great pain in head and back; skin hot and dry; lips parched; tongue furred; much thirst; loss of appetite; bowels confined.

Pulv. Scam. c. Hyd. Sub. gr. xv. Pulv. Ipecac. c. gr. v. o. n. Applic. Hirud. xij. M. Pot. Carb. 6th q. horâ.

11th.—A vesicle situated over the left labium, this morning burst, and left a small sore about the size of a shilling, sloughy, and surrounded by a livid redness, which gradually degenerates into the surrounding skin. Constitutional symptoms still high.

Cont. remed.

12th.—Two other ulcers made their appearance this morning, in exactly the same manner as the one above; one situated on the right labium, the other at the entrance of the vagina.

St. Op. gr. j. o. n. Omit P. Scammon. Cont. Mist.

Lot. Liq. Calcis c. Mucil. et Op. to the wound, and Cat. Lini Lot. Spt. Vin. Rect. to the surrounding surface.

13th.—Sores, since yesterday, have spread very considerably, and now present one continuous, sloughy, irritable, surface. Constitutional symptoms very high. Pulse 112, hard and full. V. S. ad $\frac{3}{4}$ vj.

Sumat. Statim Hyd. Submur. gr. vj. M. Effervescent. frequent. Lot. Aq. Distil. c. Op. 3j. ad lîj.

14th.—Inflammation very extensive and diffused, and of livid colour. Swelling reduced considerably. Feels greatly relieved by the bleeding. Passed a better night. Bowels not yet opened.

Sumat. Stat. Calom. c. Colocynth. gr. x.

15th.—Slough has the appearance of separating in parts. Inflammation not so extensive. Constitutional symptoms very much abated. Pulse still quick, but soft, 98 in the minute. Ordered a mutton-chop to-day.

Cont. H. Efferves. et. Lot.

16th.—Sloughs have entirely separated, and the sore presents a healthy appearance, beginning to discharge a well-conditioned pus. Another small sore over the inferior part of the sacrum. Meat to be repeated.

Cont. remed.

17th.—Sores in front are looking well, discharging good pus, and are already beginning to heal. Sore on the back has begun to slough. Constitutional symptoms not so violent. Cont. remed.

18th.—Sore on the back has partially sloughed. Better in all respects.

Cont. remed.

19th.—Sores have changed since yesterday, and appear to want action. Constitutional symptoms much as yesterday. Pulse 100.

20th.—Sores more vigorous to-day. In all respects better. Cont. remed.

21st.—Passed a good night; appetite improved; not so thirsty; tongue white; bowels acted this morning from castor oil; pulse 112. Sores in front healthy and granulating.

22d.—Slough entirely separated from the wound behind. To have $\frac{3}{4}$ iv. of port wine daily.

23d.—Constitutional symptoms have returned. Pulse 112, hard and full; tongue white; bowels confined. Complains of great pain in the right side, attended with difficulty of breathing, &c.

Sumat. Stat. Cal. gr. ij. Ant. Tart. gr. $\frac{1}{4}$. Op. gr. ss. in form. Pil. Cucurb. Cruent. Hypochond. dext. ad $\frac{3}{4}$ vij. Omit the meat and wine for to-day.

24th.—Better. Difficulty of breathing and pain gone. Bowels open; tongue white;

slight thirst. Wounds in front are healing rapidly.

Sept. 28th.—The sloughing process has destroyed the entire of one labium and part of the other, as well as a considerable portion of the superficial structure of the perineum and pubes. All the wounds are closing fast, and her general health is very good.

ST. BARTHOLOMEW'S HOSPITAL.

Fatal Malignant Disease of the Mammæ.

SARAH ACRES, æt. 39, unmarried, admitted into Letwell's Ward, June 20th, under Mr. Earle, with a carcinomatous affection of both mammæ, enlargement of the glands in the left axilla, and of the glandulæ concatenatæ of both sides of the neck, and with considerable tumefaction and induration of the left arm.

She states, that in November, 1828, she first perceived the left breast to be hard and swollen. The swelling was attended with no pain, and gradually increased till January, 1829, when she observed the left arm to be swollen and painful, and then, for the first time, felt pain in the left mamma. The weather was at this time severe and frosty, and she was a good deal employed in washing linen in very cold water, with the feet constantly exposed to wet. She remained in this state, occasionally suffering more or less pain, till June, the swelling of the arm at the same time slowly increasing; when the right breast was attacked in a similar manner, and the glands in the neck and right axilla became enlarged. The pain now remitted in the left mamma, which gradually decreased in size. The symptoms presented on her admission were as follows.

Her general appearance is that of one in the enjoyment of perfect health; the right mamma is considerably enlarged and indurated, of a high red colour, with an increase of heat; the nipple is not retracted. The left breast is shrunk in size, presents a knobby and irregular feel, and the integuments covering it are of a bluish colour. Glandulæ concatenatæ, on both sides of the neck, much enlarged. Glands in both axillæ hardened and enlarged, particularly in the left, where the vein and absorbent trunks are probably compressed. Left arm, forearm, and hand, considerably swollen; the integuments stretched to the utmost in every part of the limb; the upper part of the arm of a stony hardness; acute pain in the lower part of the fore-arm and back of the hand, with loss of sensation and of power of motion in the fingers. Pain in the right mamma not very severe; catamenia irregular.

It was determined to give iodine a fair

trial in this case, and she was directed to begin taking Tinct. Iodin. ℞. three times in the day, with Ext. Conii, gr. v. The dose of the tincture was gradually increased to ℞v. and she continued taking it till July 9th, when it was thought advisable to discontinue its use internally. She had suffered more while under its influence, and felt in no respect better. A dram of the ung. hyd. potass was rubbed into the mamma for a day or two, but the friction caused great pain, and increased the heat and inflammation.

July 11.—There seemed to be a considerable degree of inflammatory action going on, and she was ordered to be bled to ʒvj. Her appearance of health has left her, and she is worn out with continued suffering. Slight scarification of the distended integuments of the arm relieve for a time the acute pains.

Liq. Op. Sed. ℞. ad xv.

27th.—The disease is proceeding rapidly to the destruction of the patient—it seems to affect the whole of the neighbouring cutaneous glandular structure; hard knotty lumps are felt beneath the integuments under the mammæ, and extend downwards towards the umbilicus. The patient suffers greatly, the pain remitting at intervals, but returning with greater severity; strength fast declining, pulse feeble. Some rest is procured from large and frequent doses of the Liq. Opii Sedat.

August 20.—The lower jaw has been kept permanently open from the enlargement of the glands in its neighbourhood. The stomach refuses to retain any thing taken by the mouth. The right breast has assumed a yellowish transparency on the surface; but the skin is not broken. There has been a little ulceration in the upper part of the arm and beneath the axilla. The poor woman has passed sleepless nights, and suffered unremitting pain during the last fortnight.

23d.—Died at 11 P.M.

Post mortem Examination.—The mammæ, when cut into, presented a peculiar structure: there was throughout a considerable degree of hardness, and the whole mass had a marbled and nodule-like appearance; here and there was observed a small cell, containing a softer substance, but there were present none of those tough fibrous bands so peculiar to genuine carcinoma. The uterus was of its natural size, but hardened in structure; in it was found a small cartilaginous tumor. The abdominal viscera all healthy. The submaxillary gland, which was considerably enlarged, had commenced to suppurate; small tumors, of the same structure as that of the mammæ, were found beneath the integuments. In the substance of the deltoid (part of which was implicated in the diseased mass) were found small tubercles. The

origin of the pectoralis major was also wholly occupied by the disease.

The entire absence of all visceral disease formed an important feature of the above case.

HOSPITAL ATTENDANCE.

To the Editor of the London Medical Gazette.

SIR,

PERMIT me to publish, in the pages of your impartial Journal, a contradiction to the statement which has recently been made in the *Lancet*, that the students of the Middlesex Hospital have not the same facility of access to the wards which is allowed in other hospitals. The statement is perfectly untrue. The physicians and surgeons of the establishment attend at the hospital every day, at a certain hour; they go through all the wards on three days in the week, and habitually visit the more serious cases once at least every day. The days on which the medical officers do not go round the house, are Sunday, the taking-in day, the out-patient day, and the operating-day. It is, of course, the duty of the pupils to be present when the physicians and surgeons make their visit; or I may state, that, from half-past eleven till three, no impediment is placed in the way of the daily attendance of students; and that, at the visit of the morning, the students are acquainted at what time in the course of the day the physician or surgeon may propose to repeat his visit to the cases, when such attendance is necessary. Among many advantages which the Middlesex Hospital presents, the following, perhaps, deserve to be enumerated. The terms of attendance are lower than at any other hospital; the cases admitted are in some measure classified; the medical wards are distinct from the surgical. Among the latter are two wards for patients with lues; one for female patients afflicted with cancer; and part of a ward expressly endowed by one governor (the late Mr. Stafford) for the relief of male patients labouring under the same disease. The hospital, which is as large as that to which Mr. John Hunter and Dr. Baillie were attached (and which itself claims the honour of having had Dr. Wm. Hunter and Sir Henry Hallford among its medical officers), is placed in a remarkably airy and healthy situation; and being well built and ventilated, has always been free from those periodical visitations of erysipelas and hospital gangrene, to which many other establishments of the same kind are liable. I am happy, too, to have to state to you, that it is in contemplation to enlarge the present building, by constructing an additional wing upon part of the large space of ground connected with the hospital. I am

sure, Mr. Editor, that, after the cool abuse with which the *Lancet* has honoured us, you will not refuse to insert this vindication of my old Hospital.

I have the advantage of being, Sir,
Your constant reader,

JOHN MIDDLESEX.

Sept. 30.

NOTE FROM BARON HEURTELOUP.

To the Editor of the London Medical Gazette.

SIR,

HAVING had communicated to me the substance of the following extract from the letter of one of your correspondents, who says, speaking of my instruments, "M. Civiale and myself have had those instruments several times in our possession;" I beg to say, that it is probable your correspondent has been mistaken as to the identity of the instruments, from the following circumstances. Although I have given, in England and France, about thirty demonstrations of them, in public and private, it does not appear that those gentlemen obtained their knowledge at any of these, from the circumstance not being mentioned, and from the expression that they had them in their possession.

I have always kept my instruments at home; and no one can have seen them, unless by obtaining the sight of them from the persons to whom they have been entrusted in confidence. It is not likely that M. Civiale, or your correspondent, should have made so improper a request. The account given by both gentlemen of those instruments, bears evidence of the little acquaintance they have with them.

Had it been really my instruments which M. Civiale and your correspondent had seen, it is not likely that they would have given an opinion of them so totally at variance with that of the Institute of France, and the circumstance of its having honoured me with the great prize of Surgery on account of them.

I send you an account of the cases of MM. Desangiers, Riviere, Courtois, Neurohr, Delamontagne, and Bocquet (not Rochet), which will, I trust, prove an answer to your correspondent, at the same time that they are merely scientific notices*.

I shall also soon have the honour of sending you my own observations on the case of Mr. Woltre, which will be a scientific (not a polemical) answer to your correspondent.

I have the honour to be, Sir,

Your obedient humble servant,

HEURTELOUP, D.M.P.

* We have been compelled to postpone these cases till another Number.—E. G.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 10, 1829.

LECTURES ON SURGERY,
Delivered at St. Bartholomew's Hospital,
BY WILLIAM LAWRENCE, F.R.S.

LECTURE II.—Oct. 2.
On the Nature and Divisions of Disease.

GENTLEMEN,

It is the object of medicine to ascertain the nature and seat of disease, in order to discover the proper mode of treatment. If we understood in each instance what organs were the seat of disease, and how they were affected, there would be very little difficulty as to the subject of treatment. We should then be able to give an appropriate name to each disease; and we should also be able to arrange them according to natural events—that is, we might establish a rational nosology, or an arranged catalogue of diseases.

Now it happens unfortunately for us, that in a great many instances we are unable to determine the nature of disease; and in not a few instances, we cannot even state the exact seat of it. Hence you will not be surprised at finding that the names of diseases are in many instances calculated to mislead, and that those catalogues of diseases which are called nosology, are really worse than useless. The difficulties, however, to which I allude, are not in reality experienced so much in that part of the subject which is the immediate object of our attention—viz. the surgical department. They are more forcibly felt in the cases of affection of internal organs, where the means of investigation are not so numerous, and where there is greater difficulty in all parts of the inquiry. Most persons imagine that they understand very well the meaning of health and disease, yet it is not altogether easy to give the definition of these two states to complete satisfaction. Health and disease have been said to be two opposite states of the body, and certainly under particular circumstances we may admit that this representation is correct. For example, a person in a state of full health may be considered nearly in an opposite condi-

tion to that of a person in the last stage of fever. However, health and disease are not to be regarded simply as two states that can be thus compared, for under each of these terms is included a great variety of conditions, which differ materially from each other. On one side, a state of health passes, by an insensible gradation, into a state of disease; and on the other side, disease in the same way is shaded (if I may use the expression) gradually into health; so that when we come to survey those conditions which approach to each other on their boundaries, we often find a considerable difficulty in determining what is health and what is disease.

The human body consists of a great number of organs, each of them executing its own particular function, and all of them concurring in the general purposes of organization, which are to preserve life, to keep up the relation which connects the individual with the surrounding world, and to continue the species. When the structure of organization is perfect, and when the functions are regularly executed, the individual is said to be well, or in a state of health: the notion of health, therefore, combines these two circumstances, perfect structure and perfect functions. The word natural, as applied to the healthy structure, is rather equivocal, for we must admit that disease is a part of nature. The French and the Germans use the word normal, in order to describe what we call a healthy structure. This term is about equivalent to the English epithet, regular; thus the normal, or healthful structure, and regular execution of functions, would be opposed to disease, or the irregular functions of the body. Such is the general idea that we must form of the two states of health and disease.

Disease has been defined an improper or irregular execution of one or more functions of the body. This definition, however, seems to me peculiarly defective, for in fact it omits a circumstance which is of primary importance in the consideration of disease, namely, the state of the organs. The definition,

however, is correct as far as it goes; for, wherever we see an irregular execution of any function, we may safely conclude that disease exists; but we may have disease, and that of a very unequivocal kind, existing in the body, without any observable deviation from the natural state of the functions. Now warts and corns are considered to be a disease, and at all events, steatomatous tumors are diseases; yet these may arise, and they may acquire a considerable size, without the individual being aware of their existence; and even when they have arrived at a considerable magnitude, occasionally they do not disturb any function of the body, and are perhaps only inconvenient by their bulk. But suppose we take the case of even so formidable a disease as that of cancer affecting the female breast. Cancer will commence with induration and swelling of the mammary glands; and this will take place so insensibly as to attain a considerable size before the female is aware that any change has occurred, and, in fact, the tumor is discovered accidentally.

You will see, therefore, from these various circumstances, that the definition of disease, if it turn on the state of the functions, is by no means satisfactory; we must at all events regard, as of principal importance, the state of the organs of the body. We may call disease a deviation from the normal, regular, or healthy state of any solid or fluid of the body, or of any function. These various circumstances may be exemplified in the case of the stomach. The stomach may be in a state of inflammation, or may be in a state of cancer; and in both cases there is a manifest change in the structure of the organ—in the former a temporary change, in the latter a permanent change. In the case of heartburn there is an acid secretion in the stomach, and in yellow fever there is a morbid secretion, evinced by the ejecting from the stomach of substances like coffee-grounds, which are called black vomit. Here you have fluids affected by the stomach. Again, in nausea, sickness, and indigestion, you have the functions of the stomach impaired, and the organ deficient in the office which it has to perform. So that in the case of the stomach you see exemplified the three kinds of alteration which are mentioned as constituting disease—a deviation from the natural state, so far as the solid goes, or a deviation in the state of fluid secretion, or an alteration in the condition of the functions.

You will perhaps be inclined to think that the three circumstances which are combined in the definition now mentioned, might properly be reduced to one. You will be inclined to ask whether the functions of the organs can be disturbed if the structure of the organ remains entire? You will be inclined to ask whether the fluids of any part can be altered if the solid remains in a natu-

ral state? And these questions are very reasonable and proper. If a change of the functions implies an alteration in the state of the organs, and if a change in the state of the fluids involve an alteration in the state of the solids, then the definition of disease would merely embrace the alteration that may be produced in the organ itself. I can entertain no doubt, for my own part, that if our knowledge of diseases were perfect, we should be able to trace in every instance the alteration of the functions, to the alteration in the state of the organs. But unfortunately for us, our knowledge of disease is not yet perfect. In many cases we see a change in the functions of a part, when we cannot ascertain exactly what is the condition of the organ; more particularly in the case of internal disease. In many instances there are altered functions, or manifest symptoms of disease, and we are unable to say what organ these symptoms should be referred to. Therefore, in our present imperfect state of knowledge, we must admit that alterations in the functions, or changes in the state of the fluids of the body, is disease, without meaning to assert that this change does take place independently of alteration in the condition of the organs themselves. We admit such a change in the function to be disease, because we do not happen to be able to say precisely what is the condition of the organ to which the function belongs; but we do not assert that the organ continues unaltered in a state of disease.

In considering the changes which the body may undergo, we must bear in mind that they differ much in degree. There may be a change in the state of an organ of such a kind that the alteration may be visible after death, when we come to examine the part; and there may be a change that may merely affect the living condition of the frame, and which leaves no traces distinguishable after death. I do not mean to represent to you (for I do not believe it myself) that the functions of an organ can be altered, while the organ itself remains in a perfectly healthy and regular state; for, in fact, what are functions of the body? Merely the results of the exercise of the organs. The functions are the organs in a state of active exertion: the functions and the organs, with respect to each other, are cause and effect. A perfect state of the functions implies a perfect state of the organs; and an imperfect or irregular state of the functions supposes a disordered state of the organs. To say that the functions were disordered without any change in the organs, would be to say that an effect had taken place without a cause.

We come back, then, to the point just mentioned, viz. that in considering the changes that may take place in the organs of the body, we must divide them, first, into those serious changes which are visible by examination after death; and, secondly, into

those slighter changes which affect merely the living condition of the parts, and are not ascertainable after death. The living condition of every organ which is necessary for the regular execution of the functions, comprises not only the state of the structure which we are capable of ascertaining by examination after death, but also all the various internal movements which belong to a part in a healthy living condition; it likewise includes a healthy state of the fluids, and of that influence which connects the part with the nervous system, and in many cases sympathetically with other organs of the body. Now nearly the whole of the slighter changes elude our observation, for we have no means of ascertaining them; therefore in a great many instances we cannot say whether a certain organ in a living state is in a condition fitted to exercise its functions properly or not. Under certain diseases we can see how the organ is affected, by the changes that I have just alluded to: we can observe how the function is influenced by this kind of alteration. The function of the brain, for example, will be suspended, sensation and voluntary motion will be put a stop to, when the action of the heart is suddenly stopped, as in syncope; or when the function of the lungs is arrested, as in the case of suffocation. The function of the brain, under these circumstances, is stopped; and yet, if we examine the brain after death, we do not find any change in its structure. But what happens if the heart stops its action? Why, no more blood is sent to the brain—it no longer continues to furnish that supply of blood which is one of the necessary conditions to the healthy influence of the brain over the other parts of the body. In consequence of the supply of blood being thus suspended when the heart stops its action, the brain no longer exercises its influence, and sensation and volition are at an end. When the functions of the lungs are impeded, the blood no longer undergoes that change from venous to arterial, which is of so much importance to keep up the functions of all parts of the body. The effect of the change is speedily felt by the brain: whenever the blood sent to it becomes of a dark colour instead of being scarlet, its function is at an end. In both cases we see that a certain change is produced in the living condition of the brain, which suspends its influence over the rest of the body, although there is no alteration in the structure that is ascertainable after death. When, therefore, we speak of diseases being functional, we merely mean to express that they are not accomplished by any change in the state of the organs that is ascertainable by dissection; and we use the word functional in contra-distinction to organic, which denotes visible changes in the organs of the body, ascertainable by dissection after death. That is the sense in which these terms are employed.

Now it must be observable, that the words functional and organic, as applied to diseases, are often used rather loosely, and by no means in the strict sense now mentioned. When the brain can be said, strictly speaking, to be under organic disease, it implies changes having taken place in the organ that can be detected after death. But such is not the sense in which the term is commonly employed by the modern writers of this country; in fact, they range in general, under organic influence, alterations of a temporary kind—for instance, that of inflammation. A serious change certainly takes place under the condition of inflammation; but the change is a transitory one, and may leave the organ in a state of uninterrupted action. Therefore the word organic does not generally comprehend this state, but is used to denote those more serious alterations in the structure of the body which are permanent—which do not admit of change—such as that which takes place in cancer, ossification, tubercles, and changes of that kind. The same looseness of language in this respect is observable in the writers of other countries: thus Richerand, in a popular work called *Nosographie Chirurgicale*, which has been published in France, divides the diseases of all parts of the body into three classes—physical injuries, 1. *Dérangemens physiques*—organic changes, 2. *Altérations organiques*—vital changes, 3. *Lésions vitales*. Now, under the latter head, he includes inflammation: The difference between functional and organic diseases has sometimes been marked in our own language by the terms disorder and disease; but this use of these two terms is neither sanctioned by their common acceptation, nor indeed by their etymological signification, for in all common language disorder and disease are synonymous—they are used without any distinction, and if we come to enquire what is their meaning, they seem to be nearly the same. What is disease? It is an interruption of ease—it is a change in the feeling. What is disorder? An interruption of order—it is an interruption of the regular execution of the functions of the body.

The examination which we make after death is not a satisfactory criterion of the change which may take place in the state of an organ during life. There are certain changes of an obvious and important kind which seem to take place during life, and of which we find no trace after death. In the case of erysipelas, there is a determination of blood to a certain part of the skin; there is a considerable distention of the blood-vessels; there is an increased redness of the part. But all these appearances are lost when we examine the part after death. If, therefore, we referred to the state of the skin as it is found after death in the case of erysipelas, we should say that the skin had not undergone a change, and yet in the liv-

ing state we observe a manifest change. In the case of inflammation of the eye, there is an external redness visible, but this is lost after death. We are not, therefore, to conclude, because we can discern no change in the state of the part after death, that no change took place during life. We are not now considering whether a function can be diseased without a change in the state of the organs: our principal point is to ascertain whether there was a change in the living condition. The examination, therefore, after death, is an uncertain criterion, and is not decisive of the point in question. Again, before we can determine that no change has taken place in the organs, our examination after death must be a very accurate one, and the examination must be performed with the aid of a very accurate and complete knowledge of the healthy normal or regular state of the part; for, without the person has that knowledge, it is impossible to determine whether changes have not taken place, and been overlooked. Thus, we find, that in proportion as pathological investigations after death have been conducted with greater accuracy, the number of diseases supposed to be functional has been diminished. Fevers have been supposed to arise from the diseased functions of the brain, but the more accurate pathological inquirers of modern times have found out that a great many organs of the body are considerably and obviously diseased in the case of fevers. Thus, it is found, that this complaint, instead of being a functional disorder, belongs to organic diseases. The divisions, then, of disease into functional and organic, according to the view that we now take, must be regarded rather as a difference in degree, than as a difference in their essential nature. In the case of the diseases called functional, the changes that take place in the organs may be of the slightest degree, which leaves little or no trace after death. In diseases called organic, the alterations in the natural condition of the parts are of more considerable kind, and they leave behind them changes visible after death. I can by no means agree in opinion with those who regard functional disease simply as affections of the functions, or vital property, without reference to the organs by which they are exercised; and yet this is the sense in which the terms are very frequently used. How can we conceive that functions, or vital properties of parts, can be altered, if the structure of those parts remains in a normal, regular, healthy state? What would any of you think, if you were to take your watch to a maker, and he, looking at it, were to tell you there were no alteration whatever; no defect in the construction or adjustment of any part of the watch, but that the movement was affected? You would think it a strange opinion to receive, that

the watch would not go well if all the parts were actually in their perfect state. If, on the contrary, the watchmaker were to tell you that, in consequence of the watch not going well, there must be a change in some of its parts, but that he was not able to discover it, he would speak rationally. And that is the circumstance in which medical men find themselves when, in derangements of the body, they examine the organs, and do not observe the state on which the defect depends. They ought to make investigation more perfect, (for the art is not arrived at the perfection it is susceptible of,) and not to assert that the functions and vital powers are in a disordered state, while the organs remain in their natural healthy condition.

Now this is not a point of merely speculative importance, but one of considerable practical use: for those persons that believe in the existence of functional vital disease direct their treatment according to the views they entertain of these disorders. Their object is to remedy the imperfection of the function; to excite the vital properties which seem to be deficient in energy; to rouse those that appear to be dormant; and their treatment, in many respects, is calculated rather to aggravate disease than to remove it. Persons who entertain views of this kind consider paralytic affections to be merely the loss of nervous power in the part affected. If the patient is unable to move the limbs of one side of the body, they say that the nervous power is deficient in those limbs; that it is necessary to rouse them, to stimulate them, to raise them up to their proper degree. They treat paralysed limbs by stimulants of all kinds. If the affection be local, they administer local stimulants, to arouse the nervous action. They institute a plan of local treatment by stimulants in cases in which a more accurate pathological research proves that the disease exists in the brain, and that it consists, perhaps, in an increased determination of blood to the head, in a serous effusion, or in various changes of structure, all of which are, in fact, aggravated by this stimulant treatment. We have examples of a similar kind of erroneous treatment, proceeding on this erroneous theory, in affections of the eyes. When the nervous structure of the eye is affected, as those parts are so deeply seated as not to come under observation externally, we cannot actually see them, but know that the retina, or optic nerve, is diseased. The patient's sight is dim; he says it is weak, and that it wants to be strengthened. And medical men take up the same notion as the patient. They fancy that the powers of the nerve want exciting, and that it is necessary to use means to strengthen the vital properties of the patient. They treat the patient with stimulatives, in order to raise this supposed

deficiency of vital property or function, and all the while the affection of the nerve is one of an inflammatory character, which is either more or less chronic.

From the want of observation in the cases of fever has arisen the notion of debility, or suppressed energy or diminished energy, of vital functions, and the stimulating treatment, as pursued in consequence of this view. The same may be said with respect to the functions of the chylipoietic viscera in indigestion, where all kinds of tonics and stimulants are poured into the stomach in order to raise what are supposed to be deficiencies in the vital energy of that part.

It has been remarked, also, that the fluids cannot in any case be altered in their properties, except through the medium of some change in the solid parts of the body. Now the fate of the fluid parts of the body, in reference to disease, has been rather singular: for, at one period of medicine, the explanation of all disease turned literally on the changes that were supposed to take place in their composition; and, at a subsequent time, all share in the explanation of phenomena has been denied them. In the early period of the medical art, when anatomy and physiology were unknown, the enumeration of the fluids of the body was a kind of imaginary one; and these imaginary fluids were supposed to be capable of derangement in a variety of ways, which were analogous to the changes that certain fluids would undergo out of the body. These fluids of the body were supposed to be susceptible of numerous chemical and mechanical changes: they were supposed to be capable of separating into what were called particles, which were thick or thin—and so forth. All parts of disease were explained on the supposition of imaginary changes in the fluids of the body, and the means of treatment were directed to remedy these supposed alterations. When anatomy and physiology came to be cultivated—when the changes that took place in disease came to be investigated by examinations after death—of course all these notions were put an end to; and from that time the very term of humoral pathology, which includes this kind of explanation of disease, has become a sort of by-word of contempt. It has been considered that the fluids of the body are quite foreign to all explanations of disease. Perhaps, however, we are going too far in denying the possibility of all changes in the fluids, and denying to them all share in the production of the phenomena of disease. You will consider that all the supplies of new materials enter the body in a fluid state, and that all new materials pass into the blood. When you consider the various kinds and various qualities of new material that enter the blood in this way, you cannot help supposing that there must be a considerable variation both in the

quality and composition of the blood; and you cannot help admitting that these variations may have considerable power over the organs of the body, in producing changes in them. Only compare, for an instant, an individual in a state of health with a scorbutic sailor, and you will find an essential difference in the nature and composition of the blood; differences which may be capable of explaining some of the morbid conditions which we witness. The secretions of the body probably depend, in a great measure, on the state of the secreting organs; but we cannot help observing that they must also depend, in part, on the nature of the matter on which the organ acts. When we see various states of urine, which we can trace to variations in the quality or kind of food that comes into the body, we cannot help allowing that the state of the fluids deserves consideration in estimating disease; and we cannot help recollecting, that although those doctrines which constituted the humoral pathology were most unfounded, yet that this does not form the least reason for excluding fluids from consideration in viewing the phenomena of disease. Now it is true that the means of investigation, so far as the fluids of the body go, have been cultivated much of late years, and various views have arisen in relation to them; but, generally speaking, I do not know that, in the present state of our knowledge, we can derive any practical information as to the state of disease and the means of removing it from ascertaining the condition of the fluids; still we must observe that this is no reason why we should not, in consequence of farther investigation, derive considerable assistance from that source.

In concluding these remarks, I may certainly express to you my opinion, that, if disease were perfectly understood, we should be able, in each instance, to refer it to some changes in the state of some organ or organs of the body; and, consequently, the changes that take place in the functions would constitute merely external signs or symptoms of disease. I must observe to you, however, as I have already intimated, that the state of medical knowledge, so far as we have hitherto arrived at the point, is so imperfect that, in many cases, even in diseases of consequence, and those too of frequent occurrence, we are unable to assign the organ that is disturbed, and from which the phenomena flow. Thus, for example, in common fevers, the profession are by no means agreed as to the particular organ which is the primary seat of disease in these affections. In cases of intermittent fevers, which are diseases of very common occurrence, we should be totally at a loss to assign the organ which is in fault: we cannot tell what is the seat of disease in that affection. The state, therefore,

of medical science, will not allow in our day of what we may suppose will be done when pathological investigation is more advanced; that is, of reverting, in each case, from the altered functions or symptoms, to the particular alteration of some specified organ. In cases of internal disease, the changes which we are able to discern frequently cannot be referred to any assignable change in the state of any internal part, and we are obliged to name diseases after certain external and visible signs; and yet we are sensible that the names which are given are applied rather to the symptoms than to the disease. Thus, in one case, we see the urine is passed with difficulty; and when it is in the state in question we call it dysuria. It is only for want of better information that we take the term from the external disease. In another instance, we see the urine is tinged with blood, and we cannot tell what quarter the blood has come from. Hence dysuria and hæmaturia are only symptoms of a disease which, in a more advanced state of knowledge, we ought to refer to some specific organ. Dyspnoea—what is the meaning of that? Difficulty of breathing. But this is not the disease; the difficulty of breathing may be produced by various changes of various parts. We must bear in mind, then, that these are only the names of symptoms, and we must endeavour, as far as we can, to investigate the difference in the organic changes that give rise to the symptoms; nor ought we to be satisfied till we have found what the organ is that is really affected.

All organs of the body may be *primarily* affected; that is, they may be affected by causes acting immediately upon them: and all the organs may be affected *secondarily*; that is, in consequence of disease previously existing in some other organ. If boiling water be poured upon the skin, inflammation of the skin is produced;—if a wound is inflicted on the skin, inflammation will follow;—these are primary affections of the skin. If a person takes certain sorts of food into the stomach, as for instance, shell-fish, or if his stomach becomes disturbed in some particular way, he will have an attack of nettle-rash or erysipelas. In the one case the skin is affected primarily, that is, by a cause applied to it; in the other case the skin is affected secondarily, in consequence of a disorder or a disturbance produced in an internal organ, the stomach. If a person has a fulness of blood in his head, or if he employ his mind intently upon some subject, he may get giddiness, or other symptoms of disorder, in the head. So also he may get the same kind of symptoms if his stomach be overloaded with food, or his bowels should be costive. Here you have primary and secondary affections of the head. If the stomachic power be disordered, a person will be rendered sick by

the approach of certain substances or certain kinds of food: and serious injury of the head will also produce sickness. Here we have primary and secondary diseases of the stomach. Primary disease is called *idiopathic*, and secondary disease is called *symptomatic*. Idiopathic, or primary disease, is the disease or disturbance produced by a cause immediately acting upon the part; symptomatic, or secondary disease, is the disease of any part dependant on the existence of disease in some other organ of the body.

I fancy there ought to be no difficulty in conceding these principles; namely, that all the organs of the body may be primarily diseased, and that each kind of organ will admit of being disturbed in the execution of those functions which naturally belong to it. Thus the lungs, or organs of respiration, may undergo disturbance in the execution of their functions; the stomach and alimentary canal may be disordered in their functions—and so forth. When we come to examine the modes in which the various functions of the body are exercised, we can easily see the manner in which the various organs may be disturbed from the causes applied to them in the course of their natural operations. Yet, when persons have taken up certain notions respecting the preponderating importance of this or that part, they have sometimes been inclined to refer all diseases to the primary disturbance of some one or other part of the body. Thus, one observer has attached great importance to the liver, and has fancied that disease in that organ is the source of almost all diseases in the body. Another observer may attach great importance to the diseases of other parts of the chylopoietic system, as the stomach and bowels, and digestive organs generally. This has been the case of late years, particularly in the metropolis of a neighbouring country, where a physician of great eminence has, I believe, held the opinion that almost all diseases of the body originate in the part of the frame before referred to, viz. the stomach and alimentary canal. I should regard all these views as partial and erroneous, and I should have no hesitation in admitting, what I have already stated, that all parts of the body may be primarily diseased, and, no doubt, in admitting that all parts may also be secondarily diseased. We may admit further, that in proportion to the importance of any particular set of organs in the body, will be the influence which they have in exciting disease in other parts. No doubt, in this point of view, the parts that are concerned in digestion—the stomach and the alimentary canal, and the subsidiary organs—will have a greater influence in exciting disturbance in other parts of the body than many other organs. But we must not look to them as the seat of all

other diseases. We find clearly that the brain, the centre of the nervous system, may be diseased, without a disease existing in those parts, by a cause that is applied solely to it. Intenseness of application, mental exertion and anxiety, and a variety of causes that are capable of acting on the brain alone, may disturb it, although the stomach and alimentary canal generally shall be in a healthy state.

Now in most diseases you find a combination of symptoms that are referable to both these heads—that is, you find certain symptoms that arise from the disturbance of the affected organ; and you find other symptoms, that arise from the influence the organ may have over other parts of the body. Thus you have certain primary symptoms, and certain secondary, or sympathetic symptoms. When we say one part sympathizes with another, we merely denote the fact that the affections are coincident, and take place at the same time. What is the meaning of the word sympathy? It merely means *suffering with*. If, in an affection of the head, the stomach is deranged, and we say the stomach sympathizes with the head, we merely express that the stomach suffers in conjunction with the head, or at the same time as the head: sympathy merely means that. When we see a person in a state of anxiety, or distress, or pain, or suffering, and we feel an unpleasant emotion ourselves, we sympathize or suffer with the individual;—in the same way one organ suffers with or sympathizes with another. In the animal economy the word merely denotes the circumstance that the affection of one organ takes place in conjunction with another. It does not explain the fact. When we come to inquire how this is produced, various explanations may be given, according to the various causes. With regard to nervous sympathy—the nerves are distributed over all parts of the body, and particularly the nerves in conjunction with those common centres to which I have before referred. The brain, and the spinal cord, afford easy means to understand how it is that various organs are combined together in their morbid as well as in their natural functions. The sympathetic effects of one organ upon another differ materially under various circumstances. We find that the sympathetic effect is more powerful in proportion as the organ primarily affected is of greater importance in the animal economy; and the affection of the organ is of greater consequence in proportion as the individual in whom the affection takes place is more irritable, or of a more excitable system.

A LECTURE

ON THE

CONDUCT AND DUTIES OF THE
MEDICAL PRACTITIONER,

Delivered at the Theatre, Great Windmill-Street,
Oct. 5,

By B. C. BRODIE, F.R.S.

[MR. BRODIE commenced his Surgical Course on Monday evening, when he was received by a very numerous class with the warmest testimonies of cordiality and respect. On this occasion we present our readers with his introductory lecture, and hope in the present volume to give that portion of the course which treats of Calculous Disorders, so as to complete the valuable set of papers on the diseases of the urinary organs which was commenced in our first volume.]

GENTLEMEN,

You are assembled in this metropolis for the purpose of obtaining that knowledge which is to render you qualified to exercise the profession of the healing art; and I undertake, in the ensuing course of lectures, to give you some instructions relative to that department of it which we distinguish by the appellation of surgery. I say that I undertake to give you *some* instructions—for let it be observed, that it is impossible, solely through the medium of lectures, to acquire such exact and various information respecting either medicine or surgery, as, superseding other methods of study, will make you competent at once to enter into society as candidates for practice. I shall endeavour to point out to your observation the grand distinctions of surgical diseases, and the principles on which your treatment of them is to be conducted. But even of what I shall have occasion to advance, you will find that many things will neither be well comprehended, nor accurately remembered, unless you combine your attendance on these lectures with other means of obtaining knowledge—unless you compare the histories which I may give you of disease with what you actually see at present, or may have seen formerly, in the wards of an hospital, or in other places. As to the more minute distinctions of disease, and the nicer rules of practice, for a knowledge of these each individual must be indebted altogether to himself, learning them, not from books or lectures, but at the bed-side of patients; and others cannot assist him in this part of his labours further than by shewing in what manner he may prosecute his inquiries with the greatest possible advantage.

The animal body may be considered as existing in two different conditions. In the first, its natural structure is complete, and the functions of its various organs are duly and regularly performed; while in the other,

either its natural structure is altered, and its functions are in consequence impaired, or its functions are deranged, independently of any alteration of structure. It is this last condition which constitutes disease; and it is the correcting of the various aberrations which occur from a state of health, which forms the ultimate object of attention to the physician and surgeon. But the body in its perfect state, with its organization complete, and its functions regular, is the only standard by which we can judge of these aberrations; and the study of anatomy and physiology is, therefore, the first and most important step towards acquiring a knowledge either of medicine or surgery. I need not occupy your time, nor ought I to insult your understandings, by producing arguments in favour of so plain a proposition; and in these times, when knowledge has become so universally diffused, and the opportunities of acquiring it are so extensive, I need not caution you against the example of those whose indolence or conceit may have misled them into the belief that they could be enabled honourably to pursue the profession either of medicine or surgery, without having first made themselves acquainted with the other preliminary sciences. Let the student in the dissecting-room, with the scalpel in his hand, observe the form, the general appearance, and relative situation of the organs, which enter into the construction of the human body; let him then engage in a more minute analysis, and unravel the various textures of which these organs are composed; let him avail himself of what is taught in lectures and books, and of his own powers of observation and reflection, so as to understand the offices which severally are allotted to them, and the relations which they bear to each other; and let him use the knowledge which is thus acquired as the only firm foundation on which he may erect the superstructure of pathological and surgical science.

It is, however, chiefly to other objects that I wish to direct your attention in the present introductory lecture. In the outset of your studies, it is natural that you should inquire what are the qualities of mind which will best enable you to succeed in the career which you have begun, and which you should, therefore, especially cultivate? What is the peculiar nature of the duties which you owe to society and to yourselves? What are the advantages and disadvantages of the profession in which you are engaged? and how are you to pursue it so as to be enabled to pass through life with comfort, and credit, and satisfaction?

Gentlemen, there is no profession in which so much is entrusted to the honour and integrity of the individual as in ours; and, therefore, there are no persons who are called upon to be more scrupulous and exact

observers of all the rules of moral discipline than ourselves. How little of what passes between the medical practitioner and his patient is known to any one but themselves! How little can the patient judge, in the majority of cases, of the correctness and propriety of what is said and done! Received into the bosom of private families—becoming acquainted with circumstances of domestic history, which are not intended for the world—seeing, day after day, human nature humbled in affliction—children attending their sick parents—parents trembling for their children, watching for every gleam of hope which may shine in upon them, and rendered miserable even by a look or thoughtless word—credulous from anxiety; how much opportunity is there for us to cultivate our better and more virtuous inclinations! And on the other hand, how easy is it for a selfish and unprincipled person, availing himself of his peculiar situation, to convert the anxieties, the hopes, and fears, and the easy faith of his patients, their relatives, and friends, to some base purpose of private lucre and advantage! But shame be to those who betray the confidence which is reposed in them as medical practitioners! These are traitors to our common cause: the fair fame of our profession is the property of us all, and every blot upon it is an injury to each of us individually, inasmuch as it tends to lessen the estimation in which we are held, and to give us a lower place in that society of which we constitute a part.

While, however, we thus attend to the duties which we owe to society at large, let us not lose sight of those which we also owe to the smaller community of our own profession. Within certain limits, each individual among us has it in his power to influence the opinion of the public with respect to the character and conduct of his professional brethren; and occasions will not be wanting which will offer some inducement to a shortsighted, ill-disposed, or self-sufficient person, to endeavour to obtain credit which he does not in reality deserve, at the expense of another practitioner. Candour and generosity belong to youth, and I am willing to believe that there is no one among those whom I now address who does not feel that he would be degraded and disgraced if he were to stoop to such mean and dishonourable methods of self-advancement. Gentlemen, may these sentiments, which nature and education have implanted in your hearts, remain with you in your maturer years! May they never be allowed to perish from neglect, during the sunshine of professional success! May you continue to cultivate them even under the shade of professional disappointment! That simple but comprehensive principle of Christian morality, which inculcates that you should do unto others as you would they should do unto

you, is applicable to our peculiar pursuits as much as to those of common life. And here, as on most other occasions, fortunately for the weakness of human nature, those whose views are not confined to the present moment, but who look to the ultimate result, will discover that propriety and expediency go hand in hand. Rarely does it happen that he who has used his best endeavours to improve himself in skill and knowledge—who has been honourable in his dealings with the public, and just to his own profession—has reason to complain, at the end of his career, that he has failed in his undertakings. The friendship of his competitors, and the respect of society at large, attend him in the decline of life, and serve to illuminate that which would be otherwise the darkest period of his wordly existence.

Gentlemen, if there were nothing to occupy our attention beyond the study of morbid actions and changes of structure, and the application of remedies for their relief, the practice of our profession would be comparatively simple. But in those beings on whom our art is exercised, we find, super-added to the animal frame, the percipient and thinking mind, endowed with feelings, passions, and prejudices; and in many instances having the judgment weakened, feelings rendered more acute, and prejudices aggravated, by the influence of corporeal disease; by long confinement; by sleepless nights and tedious days; by anxiety and pain. It is to the advantage of others, as well as necessary to our own satisfaction and comfort, that, while we study the functions of the body, we should also pay attention to the movements of the mind. We should regard our patients as influenced by moral as well as by physical causes, and requiring different treatment, according to the peculiarities of their mental constitution, and the peculiar circumstances in which they are placed. But who can control the minds of others who has not first learned to regulate his own?

Γνωθὶ σεαυτὸν — know thyself! This maxim, which was inscribed over the portico of the temple of Apollo, as an admonition from the Deity to all mankind, may, with good reason, be especially addressed to the members of the medical profession.

It would undoubtedly be remarkable, if we, who are inured to scenes of woe, and engaged in the daily contemplation of human nature, labouring under such a variety of afflictions, were to be affected by the sufferings which we witness in the same degree as an ordinary observer; neither is it desirable that it should be so. The heart would break; the head and hands would be unfitted for the duties which they are required to execute; if, as we advance in life, retaining the keen sensibilities belonging to our earlier

years, we were still to become faint, and sicken at the sight of a tedious and painful operation, or turn with disgust from a patient who is sinking under the influence of some incurable and loathsome malady. Let us not, however, fall into the opposite extreme of insensibility to the miseries of others. Surely there is nothing in the nature of our pursuits which should operate upon our moral character so as to annihilate our better and kinder feelings; and if there were, we ought to endeavour to counteract such a prejudicial influence. I do not hesitate to assert that the person who can look with indifference at the various calamities which are connected with disease, is not one who can deserve the confidence which ought to be reposed in a medical practitioner. Mere upright principle, indispensable as it is in one of our profession, is insufficient in itself; some gentler qualities are necessary to give full effect to the most honorable and correct intentions; and without them that degree of anxiety for our patient's welfare cannot exist which leads us to watch over every change that may take place in a dangerous complaint, and to attend to the minute but important details of medical and surgical treatment.

There is nothing which distinguishes the individual who has enjoyed the advantages of education from the uncivilized man more than this circumstance, that the latter is the slave of his passions, which are almost the sole motives of his conduct; while in the former these are, or are expected to be, in a very great degree, subjected to the dominion of the intellect. There is no person to whom this power of self-command is more essential than it is to the medical practitioner. The occasions which call for the exercise of this faculty are of daily, I may say of hourly, occurrence. The individual who is in a state of constant torture, or whose patience is exhausted by a long protracted, though less painful illness, may be fretful and peevish, may be insensible to the kindness of his most zealous friends, and may receive their attention without the smallest acknowledgment of gratitude, or may even repay it with rudeness. But let not us be peevish and angry in return; let us consider what I have just mentioned as symptoms of corporeal disease, which should excite in us no other sentiment than that of commiseration. We owe this to the sufferings of human nature; we owe it also to ourselves; for if we were to look upon the case in any other point of view, our feelings would be continually outraged. A similar allowance is to be made for those whose anxiety for themselves, or for their friends, leads them to perplex us on less important occasions with a number of trifling, and perhaps unanswerable questions. Be, if you please, brief in your communications, but bear in

mind, that whenever you lose your temper, you lose also your influence over your patient, and expose yourselves to the attacks of calumny and ill-nature. Connected, as we are, with the whole of society, and society being composed of individuals having such diversity of characters, you will not be surprised that you should find some who will repay you for your professional attentions with gratitude beyond that which you have a right to claim. You will also not be surprised if you find some persons who, from their own mistake, from the misrepresentations of others, or even from the natural bad dispositions of their own minds, will be led to conduct themselves differently towards you; will blame you where you deserve credit; will lay to your charge the evils which the natural and unalterable course of events, or their own irregularity and folly, has brought upon them; or will attribute to you some gross error or negligence, where no error has ever been committed; where you have actually been devoted to their cause, and have rendered them the most essential service. This, however, is not our peculiar lot; it is the lot of all those whose profession connects them with the world at large;—the minister of state, the leader of armies, the judge, the barrister. Far be it from me to advise you to compromise the dignity of your professional character by quietly submitting to injurious treatment; but, nevertheless, I must caution you, that you do not, by any act of hasty resentment, give an advantage to those who are ill-disposed towards you. Be prepared, in the outset of your practice, for these things, not indeed as a frequent, I may say as a rare occurrence; and as far as in you lies, on such occasions, let a feeling of contempt and indifference supersede that of anger and mortification.

We have all heard a great deal said respecting the manners of medical men. It appears to me, indeed, that many attach more importance to this subject than really belongs to it. It is true that it is desirable that the external behaviour of a physician or surgeon should to a certain degree correspond with that of the particular class or classes of society among whom he may be professionally employed. It is true that it is of consequence to the comfort and satisfaction, both of the patient and himself, that he should impress the former with sufficient confidence as to his skill and knowledge. It is true, also, that brutal and unfeeling manners, offensive as they are in all persons, must be especially so in one of us; and that no individual can be satisfied with the attendance of a medical practitioner who seems to be indifferent and careless as to the favorable or unfavorable result of his case. But all this brings us back to some very simple rules of conduct. Lose no opportunity of acquiring knowledge, for know-

ledge will give you confidence in yourselves; and that will enable you to inspire others with it also; at least you can depend on no other means employed for that purpose. An ignorant person may indeed, by silence and solemn looks, occasionally obtain the credit of knowing that with which he is actually unacquainted. But the deception is not permanent; the mask will sooner or later drop off; and explanations and subterfuges will only serve to render his ignorance more manifest. Again, it is necessary that you should have the earnest wish to contribute all that is in your power towards your patient's welfare, and leave no method unemployed which is likely to be of service to him. Mere professions of interest are of little value; they are too flimsy not to be easily seen through, if unaccompanied by active exertions; and if such exertions be not wanting, professions are unnecessary. I repeat that, if you have a competent share of knowledge and skill; if you possess a feeling of kindness towards your patient, and an earnest desire to do the best which can be done for the relief of his sufferings, your manners will form themselves, and you need have no further anxiety respecting them. To adopt any less honourable artifice, is beneath the dignity of our profession. Be it observed, moreover, that natural manners are rarely otherwise than agreeable; while artificial, and affected manners, are almost invariably the reverse. There can be no greater mistake in conduct, not only on this, but on all other occasions, than to imitate the manners of another person. A tall man, who puts on the coat of a short one, is less ridiculous than a person who assumes the manners belonging to a character that is different from his own.

I may here, without impropriety, advert to another subject, to which the consideration of that of which I have just spoken in some measure leads us. We are called upon, in the majority of instances, to give an opinion to the patient and his friends as to the nature of the disease under which he labours, and its probable termination. This part of our professional duties requires much judgment and consideration. It is evident that a complicated case will require a careful investigation; during which, one circumstance may, in the first instance, incline you to one opinion, and another circumstance may afterwards incline you to another opinion, and you may not be able to satisfy yourself that you have arrived at a correct diagnosis until after much hesitation and doubt. But these difficulties are not to be communicated to the patient. He can have no interest in any thing but obtaining the ultimate result of your inquiries. Thinking aloud on this, as on all other occasions, is most injudicious, leading to perplexity and confusion, always lessening, and not unfre-

quently destroying, the confidence which you would wish to have reposed in what you say. You are not called upon to inform others of what passes in your own mind until your investigation is completed; then deliver your opinion simply, and as free as possible from technical expressions, so that it may be easily comprehended; and you will use your own discretion in each particular instance, as to whether you should or should not explain the grounds on which that opinion rests. It appears to me that you are called upon, as a matter of propriety, and even of good policy, to communicate to your patient the actual state of your own knowledge of his case; to place before him, as nearly as possible, the view which you have been led to take of his present condition and future prospects. The circumstances are very rare, indeed, which authorize you to deviate from the rule of telling truth. It is of the utmost importance both to your patient and yourself that he should believe what you tell him: and how can you expect him to possess faith in what you say, if his experience convinces him that you have in any way deceived him? Moreover, if you endeavour to represent things as different from what they really are, it will be impossible for you, in the course of a long attendance, to avoid being involved in numberless contradictions. I will grant, however, that circumstances may occur which will make it unadvisable, and even improper, that you should disclose at once to your patient the whole of what you know. For example: if a person labouring under a severe and acute disease be informed of the full extent of his danger, the influence of this upon his mind may very materially diminish his chance of recovery. If you are consulted by a patient who labours under some chronic affection, of which you know that it is absolutely incurable, and that it must, in spite of all the exertions of your art, go on inevitably, though perhaps slowly, to his destruction, it is rarely (I may say it is never) justifiable for you, in the first instance, to make him aware of the whole extent of his calamity. The shock may be more severe to some than it is to others; and, for the most part, it will be greater to those who have enjoyed uniform good health and an uninterrupted flow of spirits, than to those who have been in some measure prepared by occasional attacks of acute disease, or constant, though slighter, ailments; but, though in different degrees, still it will be a shock to every individual of the human race, to have the intelligence of his labouring under a mortal and hopeless disease communicated abruptly to him. Be not deceived on these occasions by the representations of the patient. Those who say to you, "I wish to know exactly my own situation; if you tell me that I am to die to-morrow, I am per-

fectly prepared for the event," are often the persons who are, in reality, the least fitted to receive such a communication. Observe that I am now speaking of your conduct in the first instance, when you are first consulted, or at least when you have first ascertained, beyond a doubt, the desperate nature of the case. Afterwards, your conduct must depend on the peculiar circumstances in which the individual is placed, or on his peculiar turn of mind. It may be of the greatest importance to his family that he should be apprised of his approaching dissolution, that he may have the opportunity of arranging his worldly concerns, for their future benefit; or, in the progress of his disease, his mind may have become gradually so habituated to the contemplation of what may possibly occur, that he may look forward to death, as the end of his sufferings, with satisfaction, instead of dismay; and surely it will then be right not to withhold from him that information which will be useful in the one instance and consoling in the other. Again, there are persons who cling to the hope of some favourable change to the very last; who, even when they cannot but, on reflection, be convinced that all reasonable expectations of recovery are vanished, will still receive with gratitude a look or a word which signifies to them that the smallest amendment has taken place. Here you will study your patient's natural disposition, not forgetting that, where you cannot heal the body, you may still be of some service by affording consolation to the mind: and this may be accomplished, in general, without any actual departure from the truth, by avoiding to notice those things which indicate an alteration for the worse, dwelling on trifling alterations for the better; and dexterously managing your conversation, so as to avoid giving direct answers to such questions as, if answered, must lead the patient to a too intimate acquaintance with his real condition. The management of incurable and hopeless chronic cases is one of our most painful, but it is at the same time one of our most important, duties. In the outset of my professional career, I was accustomed to feel as if it were scarcely just and conscientious to continue my attendance on a patient under the circumstances which I have described, whose disease was entirely beyond the reach of art. I feel differently at present. You may generally lessen actual suffering, even where you can render no more essential service. You may soothe and tranquillize, and even cheer the sinking heart. Moreover, human nature is so constituted, that either the patient or his friends will look for assistance to the very last. If you withdraw your attendance because you can do no positive good, another person may intrude himself with vain promises, who will do positive evil; and thus an honourable

and well-intentioned practitioner may save a suffering fellow-creature from becoming the victim of impostors and quacks.

I trust that you will find hereafter that I have not occupied your time altogether unprofitably, in drawing your attention to some of the more essential circumstances connected with professional conduct. Be assured that, in so doing, I have endeavoured to avoid being influenced by theoretical views. The remarks which I have made, such as they are, have been suggested by the serious consideration of what has occurred under my own observation, and in the course of my own experience. Giving, however, to these inquiries all the importance which they deserve, it must be allowed that the investigation of the history, the symptoms, and the treatment of disease, is more important still; and this leads us to another subject: what are the qualities and habits of mind which are the most useful in these latter studies; by means of which you may be the best fitted for the acquirement of surgical knowledge and the application of it to practice?

You will soon discover that persons whose minds are very differently constructed, may, nevertheless, attain the same degree of professional reputation and character; and no individual is to be disheartened, or dismayed, because he finds that he is deficient in some one quality through which another has been enabled to excel. In the profession of the law, we have seen the strong intellect of Thurlow, and the genius and imagination of Erskine, afford to each of them the means of becoming elevated to the same high station; and in ours, that which one individual accomplishes by superior sagacity, another may accomplish by greater diligence and application, or by a more perfect development of the faculties of thought and reflection. Nevertheless, if, with poetic license, we were to pourtray an ideal character of an individual more eminently qualified than any one whom nature has created for the comprehension of our sciences and the practice of our art, we should undoubtedly represent him as possessed of various intellectual endowments: and although we may thus be led to form a conception of that which the efforts of man will never realize, yet it cannot fail to be of advantage to us that we should, while engaged in our professional pursuits, be in the habit of measuring ourselves, not so much by that we see in real life, as by this imaginary standard. This will not only prove the best antidote to the follies of conceit and vanity, but it will afford us a better opportunity than we should have otherwise of discovering in what respects we are deficient, and what are the particular faculties and powers of mind which require in each of us to be exercised and strengthened.

One thing, then, which is very necessary to us is, that we should be habitually accurate and minute observers of individual facts. We should watch the smallest changes which occur in the progress of a disease; we should extend the same careful observation to the appearances which are disclosed by the inspection of the dead body, and the operation of remedies. Some persons may naturally be gifted with the faculty of minute observation in a greater degree than others; but in the former it may be impaired by neglect, and in the latter it may be improved by cultivation. There are some cases of disease in which little else than what I have just mentioned is necessary for them to be understood; in which this is almost alone sufficient in their right diagnosis and treatment; for example, fractures, dislocations, wounds of muscles and tendons, exostoses, and various other diseases, which are situated externally, and are not connected with derangement of the general system. It is equally necessary in cases of greater difficulty, where the disease being situated internally, is not at once cognizable by our senses; or where it proves a part of some constitutional affection. But here other and higher faculties are necessary also. We must trace the resemblance which exists between different diseases, and we must at the same time note the points in which they differ from each other; we must compare the present symptoms with the past history; we must reflect and reason, and weigh probabilities. It is the power of rightly and readily calculating probabilities, which, in our profession, as in the common affairs of life, constitutes the man of judgment, and I need scarcely say in what a multitude of instances, where positive and demonstrative evidence is wanting, this power requires to be exercised.

That inventive faculty, which combines, and abstracts, and perceives, remote relations and analogies, which we denominate genius, may not be necessary to the obtaining an accurate knowledge of what is already known, nor to the judicious exercise of the established rules of surgery. But let it not, therefore, be rejected as a thing that is useless and unprofitable in our pursuits. It is far otherwise. It may afford the means of throwing some new light, not only on the rare and dangerous, but even on the most common and trifling cases: and let me ask if it was not the genius of the Hunters which first discarded the clumsy mechanical and chemical doctrines, which formerly prevailed in the medical schools, and led to the establishment of that new philosophy, in which all modern improvements and discoveries, connected with medicine and surgery, may be said to have had their origin.

Diligence, perseverance, application,—let not these be regarded as inferior and subordinate qualifications. They are quite

compatible with the brightest genius ; and, in fact, genius can accomplish nothing that is truly great without them. Unless you have the power of keeping your attention fixed for a length of time on one object, you will not be able properly to investigate any case of complicated disease. Beware how you habituate your minds to be constantly wandering from one subject to another. It is a good rule to be observed on all occasions, that your attention should be devoted to the subject before you, and not directed to any thing else, until you have examined it on every side, so as perfectly to comprehend it.

Need I tell you, that presence of mind and self-possession, important as they may be under all circumstances, are especially so in operative surgery. Much here, undoubtedly, depends on physical constitution ; and what is easy to one person may be, comparatively, difficult to another. Nevertheless, the best foundation of these qualities is the confidence which is the result of knowledge ; while that confidence which arises from insensibility and ignorance is worse than timidity.

It appears to me not improbable that at the conclusion of the present lecture some of those whom I now address may feel disheartened at the prospect which lies before them, when they consider how extensive are the acquirements which are necessary to the medical practitioner. To understand the natural structure of the human body, and its healthy functions ; to understand also the numerous varieties of disease, and the operation of remedies ; to learn the control of our own feelings and conduct, and to study and know the hearts of others ; all this, they may say, is too much for an individual to undertake. Wherefore should we not turn aside to some other profession which is less difficult and arduous ? Gentlemen ! there is none among the more liberal and enlightened professions, concerning which, if its various duties be considered in the detail, a person, who has just entered on his studies, may not be inclined to make a similar observation. But, bear in mind, that no one is expected to embark in the practice of a profession perfect in knowledge and in conduct. This is the work, and ought to be the great object, of a man's life ; and that which it would be impossible for us to effect in the brief space of a few months, we may accomplish by means of constant attention, and of efforts continued for many successive years.

If time permitted, I might say much to you in favour of that profession which you have chosen for your own. Is there any science more curious, more interesting, more comprehensive, more sublime, than that which relates to the phenomena of life ? and is not this science the basis of medical and surgical knowledge ? Our profession,

above all others, admits of a manly independence of character in those who pursue it properly. The public, or that portion of the public to which you belong, will be your patrons : perform your duty towards them ; lose no opportunity of improving yourselves in knowledge ; practise your art honourably, and you will never find occasion to cringe or stoop, in order that you may procure the favour of any individual. You will make your own place in society ; and certainly need not feel yourselves inferior to those, who, reposing on the advantages of artificial rank, or of hereditary wealth, pass their days in trifling occupations, and seem to think that, born for themselves alone, they are not called upon to contribute *their* exertions towards ameliorating the condition of the human race.

I shall trouble you with only one observation more. It may be said of our profession, that, unlike most others, it has for its constant and sole object to confer benefit on others. The advocate, at one time, pleads for the guilty ; and at another endeavours to convict the innocent. The soldier engages to go wherever he is sent, that he may destroy the lives of those from whom he never received an injury : but the physician and surgeon are engaged only in lessening the afflictions, and prolonging the existence, of their fellow-creatures.

OBSERVATIONS

ON

STRICTURES OF THE RECTUM.

BY HENRY EARLE, F.R.S.

To the Editor of the Medical Gazette.

SIR,

HAVING had occasion lately to examine the body of a child, aged 15 months, who died of hydrocephalus acutus, I was struck on opening the abdomen with a very remarkable deviation from the usual course and length of the large intestine. The descending colon, on gaining the brim of the pelvis, instead of proceeding downwards to form the sigmoid flexure, suddenly took an upward direction under the arch of the stomach, crossed obliquely to the right iliac region, and then descended to form the rectum. The portion of intestine above described was more than 12 inches in length, and was free in the cavity of the abdomen, being quite enveloped in peritoneum, like a small intestine, and having a reduplication of peritoneum similar to the mesentery, of three inches in length. It was not sacculated like the rest of the colon, having no visible longitudinal bands, and in every re-

spect, except its volume, it bore a close resemblance to a portion of small intestine. It was so loosely connected, and so pendulous, that it might very easily have been included in a hernial sac on the *right* side. I have considered this fact deserving of being recorded in your valuable journal, not only from its being peculiar, but from the important practical inferences which may be drawn from it. I have many times met with similar deviations to a less extent, more especially in female subjects, where the colon will often be found to cross over to the right side before descending to form the rectum. I had occasion to mention this circumstance last spring, in some clinical observations on a case of diseased rectum; and in the course of the same week two instances occurred in examinations which were made in the dead-house, illustrating the truth of the position. I mention this to prove that it is by no means a rare occurrence, though in no work on anatomy, which I have perused, is any mention made of such a deviation.

The importance of every surgeon being aware of the possibility of such an occurrence, will at once strike your readers, when it is considered what serious and even fatal injury might ensue from a surgeon attempting to pass a rectum bougie according to the prescribed rules, in such a case. He would infallibly meet with resistance, which he would probably mistake for stricture, and if he employed any degree of force, he would lacerate the bowel, and destroy his patient; for, be it remembered, that this accident is far more likely to occur when the coats of the intestine are healthy than when they are thickened by disease. This was the case in an instance which lately formed the subject of a judicial inquiry; the intestine was quite free from the semblance of stricture or disease, and consequently was more easily lacerated by the degree of force employed to overcome the imaginary stricture; and here, sir, I will take the liberty of offering my testimony on the subject of strictures of the rectum—a testimony founded on upwards of twenty-four years' practice in the largest hospital in London, and on examination of most of the collections of morbid preparations.

It is my firm conviction that strictures at the sigmoid flexure, or higher up, are very rare occurrences in-

deed. The most common seat of disease of the rectum is from two to five inches up; a part which can always be satisfactorily examined with the finger of the practitioner, or with the assistance of a speculum ani.—When stricture is said to occur beyond this, I should always be inclined to be sceptical, as many circumstances render it very difficult, if not impossible, to ascertain the fact during life. In some instances I have no doubt the gut takes the direction which it was the object of this paper to explain; in others, the promontory of the sacrum projects so as to mislead the practitioner; in others, again, there may be enlargement of the ovary, or other tumors in the pelvis, which may afford an obstacle to the introduction of instruments. These circumstances may, and I have no doubt have often, misled surgeons. But I fear this excuse cannot be offered for those who would represent stricture of the sigmoid flexure of the rectum as one of the most frequent maladies which flesh is heir to. Such men, I fear, are more inclined to deceive others than to be the dupes of their own imperfect knowledge. If this were not the case, why should they be so over anxious to keep their patients in ignorance of the real state of their bowels, by the daily exhibition of purgatives, when the appearance of one natural evacuation would undeceive them and their patients, and would afford more satisfactory evidence of the actual state of things, than all the bougies that were ever invented? I trust that I shall not be considered improperly severe in thus exposing a growing evil, and warning the rising generation from listening to the plausible assertions of men who betray the sacred trust conferred upon them, and who prefer the acquisition of lucre to the honourable discharge of the duties of their profession.

To return from this digression: there is yet another circumstance which induces me to attach importance to the fact which called forth these observations, namely, the light which it tends to throw on an affection of the rectum which occasionally occurs, and which is productive of much distress and inconvenience to the patient. The affection to which I allude has been described by the late Mr. Chevalier, under the title of "*Relaxed Rectum*," in a paper published in the *Medico-Chirurgical*

Transactions, vol. x. Mr. Chevalier considers the affection as "a semipro-lapsus of the upper part of the rectum into the lower, in consequence of great dilatation of the gut from accumulation of fæces." I shall proceed to describe the affection, as I have met with it in many instances in the living subject, and as it appeared on investigation after death, in one case which I had an opportunity of examining.

In examining a patient suffering under this affection, it is indispensably necessary to make such examination with the finger, as no bougie, however skillfully employed, will convey any just impression of the nature of the malady. On passing in the finger it is not uncommon to find some spasmodic contraction at the anus, the circumference of which is generally more or less surrounded with hæmorrhoidal excrescences. Immediately on passing the sphincter ani, the finger enters into a large cavity very much exceeding the natural dimensions of the gut; and here I would observe that before making any such examination the bowel should be well cleared with enemata. If the finger be passed on and carried round this large cavity, numerous loose pendulous folds of relaxed mucous membrane will be felt readily yielding to the pressure of the finger. In some cases the finger will detect, in the midst of these loose folds, a portion harder and more resisting than the rest, and of a circular form. On carefully tracing the outline of this circular opening, which has much the feel of a slightly dilated os tinæ, the outer margin will be found to gradually terminate in a *cul de sac*, of greater or less depth, according to the extent of the introsuscepted portion of gut. This state of the bowel can be felt only in those cases where the introsuscepted portion has descended near the anus. When it occurs higher up in the rectum, beyond the reach of the finger, all that can be detected is the large cavity surrounded with loose folds of thickened mucous membrane, and the muscular coat of the gut appears to have lost its contractile power. In making this examination in a female, the uterus will be found unusually low, and drawn backwards into the concavity of the sacrum. Not unfrequently, the uterus is enlarged, and the bowel is much thickened at the surface corresponding

to that organ. In such cases, if the fore-finger of the other hand be introduced per vaginam, at the same time that examination is conducted per anum, the uterus will be felt partially retroverted, and, on attempting to raise it, the corresponding portion of rectum will be found to move with it: preternatural adhesion will, in fact, be found to exist between the peritoneal surfaces of the rectum and uterus. When this introsusception exists in the lower part of the rectum, it may be confined to the mucous coat of the intestine, as Mr. Chevalier supposes; but when higher up, the whole thickness of the bowel descends; and if the affection be not soon relieved, more or less adhesion will take place between the surfaces, and the prolapsed portion will become thickened and contracted, forming a permanent stricture of the most obstinate kind. Such was the impression of the nature of this affection, conveyed by an examination of many cases in the living subject; only one opportunity has hitherto occurred of investigating the subject further, and ascertaining the actual state of parts by anatomical investigation. The instance in which this occurred was an exceedingly aggravated case, where other morbid changes had taken place, and the mucous membrane of the intestine was in a state of ulceration. Extensive firm adhesions were formed between the peritoneal surfaces of the rectum and uterus. The latter organ was enlarged and displaced, forming almost a valvular obstruction to the passage of the fæces. About an inch and a half of the whole circumference of the rectum was introsuscepted, forming a remarkably firm indurated stricture, commencing a little below the promontory of the sacrum. Below this portion the rectum was enormously distended, the mucous membrane thickened and discoloured with numerous tortuous veins, rendered varicose by the pressure of the firm condensed mass above. In patches, ulceration of the membrane had taken place at and above the stricture. On tracing the bowel upwards, I found that it took a direction to the right iliac symphysis, then crossed over from the right to the left side, and terminated in the descending colon.

On considering this subject maturely, it appeared not improbable that a predisposition to this form of introsus-

ception might be traced to this natural deviation from the usual course of the intestine, and its being loose and pendulous immediately above that portion which is firmly bound down in its situation by the fold of peritoneum known by the name of mesorectum. The not unfrequent occurrence of this deviation, more especially in females, who are most disposed to this affection, induces me to offer this explanation to my professional brethren, to be confirmed or confuted by subsequent investigations. Mr. Chevalier, in the valuable paper above alluded to, refers this state of semiprolapsus to habitual costiveness, and inattention to the due performance of the natural functions. By thus allowing large quantities of faecal matter to collect in the rectum, its cavity becomes preternaturally enlarged, and its muscular parietes lose their contractile power. To expel the contents of the rectum, a greater exertion of the abdominal muscles is rendered necessary, by which Mr. C. conceives the upper undilated portion of the rectum is forced downwards into the lower dilated portion. This solution of the immediate cause of this affection is ingenious, and may, in many cases, be correct; but I have met with others, and have one at the present moment under my care, in which this state of gut exists in a very aggravated degree, of which the previous history will by no means admit of such an explanation, as the patient was never subject to constipation until very lately, until, indeed, those alterations which have been described had actually taken place, which so interfere with the mechanism of the parts (if I may use the expression) as materially to interrupt the due performance of their natural operations. In such cases, I conceive Mr. Chevalier may have confounded cause with effect, and have referred to the relaxed state of the lower portion of gut as the cause of the prolapsus, when, in point of fact, it may have followed as a natural consequence of such prolapse, the effect of which would be mechanically to interfere with the due muscular contraction of the lower portion of gut upon its contents. In such cases, I conceive it not improbable that there may have been a predisposing cause referable to the loose and pendulous state of gut which I have already endeavoured to explain.

It remains for me to give some account of the symptoms which characterize this affection, and the means best adapted for their relief. Patients suffering under this complaint, are sometimes liable to the symptoms common to all permanent obstructions of the rectum—namely, a frequent desire to evacuate the contents of the bowel, great difficulty in effecting this, and an unsatisfactory feel of not having effected the object immediately after an alvine evacuation. This induces them to strain and exert the abdominal muscles, which tends much to aggravate the mischief, which thus may be said to ingender the seeds of its own increase. They are liable to great distention of the colon, with wind and scibalous portions of faeces, causing severe abdominal pains, and a sense of weight and uneasiness on the left iliac region. The greatest difficulty is experienced in voiding the accumulated flatus, which rarely passes without a discharge of faeces. A sense of weight is felt in the pelvis, and the lower extremities have a peculiar feeling of cold and numbness, sometimes amounting to partial paralysis. At other times, patients suffer from spasmodic pains and cramps in the muscles of the legs. The uterus in the female, and the prostate gland and bladder in the male, participate much in this affection. There is a constant sense of bearing down and profuse leucorrhœa, with frequent micturition, which occasionally lead to the supposition of the uterus or bladder being the actual seat of disease. A lady, whose case I have already alluded to, was for several years treated, by the late Mr. Pearson, for a supposed incipient cancer of the womb. In another instance, a patient had been ordered, by a very eminent surgeon, to have issues made in the loins, under a supposition of the existence of disease in the spine, in consequence of the numbness in the lower extremities. In addition to these symptoms, which are more or less common in other cases of diseased rectum, there are some which are peculiar to this affection. From the large cavity which exists below the strictured or prolapsed portion, very large accumulations of faeces occasionally take place. Patients, under these circumstances, have frequent calls, which they obey; and as they void something, however small, it tends to mislead them, and to induce

them to give a very erroneous account of themselves. Thus, when the state of the bowels is inquired into, the ordinary reply is, that they are quite open—indeed, that they have very frequent evacuations. This may occur, and yet an enormous quantity of hardened feces may be still retained in the dilated and nearly palsied gut, which will often require mechanical aid, in addition to the employment of soft soap and other enemata. At other times patients are incapable of retaining the feces, if at all liquid, as soon as they descend through the prolapsed portion into the lower cavity. In such cases the power of the sphincter ani is much reduced. Patients have sometimes distinctly described the difficulty experienced in passing the contents of the colon through the stricture, and their want of command either to expel or retain the feces when they had so descended into this cavity. Much inconvenience is experienced in consequence of this when active purgatives are administered.

Another marked symptom which occurs in this case is the frequent and, at times, copious involuntary discharge of mucus from the irritated mucous membrane lining the pouch or cavity. This being generally discoloured, leads to the supposition of some internal abscess having broken.

In the treatment of these cases the great object to be attained is to restore the prolapsed portion of bowel, or relaxed mucous membrane, to its proper relative situation; and this is to be attempted by the use of soft wax bougies, of from six to eight inches in length, and the habitual employment of injections. When a bougie can be successfully passed into the aperture of the gut, and the prolapsed portion gently carried upwards, patients experience great and well-marked relief. The bougie not only supports the bowel in its situation, but in the female it acts as a pessary, and by supporting the uterus, relieves all the distressing symptoms depending on the retroverted state of that organ.

This plan of treatment, combined with injection and the mildest purgatives, will in some rare cases, fortunately taken at an early period, effect permanent relief; generally speaking, however, it is only in our power to palliate the symptoms, and afford tem-

porary alleviation by the judicious employment of the same means.

In making use of the bougie in these cases, the surgeon is particularly liable to be misled, and to fancy that he has succeeded in passing the instrument through the stricture, when, in fact, it has never entered it. This deception can only be detected by following the bougie, after its introduction, with the finger, when, in very many cases, it will be found coiled round in the large loose cavity so often alluded to; and it sometimes happens that in making this examination, the actual opening or continuity of the bowel is first detected, from the folds of relaxed mucous membrane being expanded by the coils of the bougie. The common source of failure in introducing the bougie arises from the extremity of it passing into the *cul de sac*, which surrounds the rim of the prolapsed portion of bowel: a degree of resistance is at first felt, which after a time yields as the bougie becomes softer, and it will now pass on with comparative ease, in consequence of the point having turned downwards, and the bougie coiling round in the concavity of the sacrum. This error may sometimes be detected at the time when it is committed—namely, at the moment when the obstruction is apparently giving way: if the surgeon quits his hold of the bougie at this moment, it will recoil upon him in the same manner as when a wax bougie becomes twisted in the urethra: on the contrary, when it enters the stricture, it will be steadily retained there, and will even afford some resistance to its being withdrawn. It might at first be supposed that such an error as I have described could be detected on the removal of the instrument; and so it may be, by an experienced eye, well acquainted with the appearances produced by real stricture of the gut, and these fallacious indentations and impressions caused by the sudden twisting of the softened bougie within the cavity of the rectum; but to the uninitiated, these marks will be considered as proofs of the existence of stricture, which they imagine they have passed. I may appear tedious in dwelling thus on this subject; but so much depends upon the proper application of the bougie, and from long experience I well know the great difficulty in some cases attending this apparently simple opera-

tion, that I have endeavoured to convey to others all the information in my power.

In some cases I have found it necessary to employ a well-polished metallic tube, like the French *speculum vaginae*, which I have passed into the lower cavity, and having, with the assistance of a lighted taper, observed the opening of the bowel, have passed the wax bougie through the metallic tube, and having entered the stricture, I have then withdrawn the metallic tube, and carried forward the bougie. In other instances I have employed the fore-finger of one hand in the vagina to direct and steady the application of the bougie with the other, and to ascertain whether it had turned or not. With all these precautions, and this knowledge of the nature of the difficulties to be overcome, I am willing to acknowledge that I have been often foiled; and I feel quite confident in making this assertion, that many who fancy that they have succeeded, would have been undeceived if they had taken the trouble to introduce the finger either per vaginam or per anum, after the bougie had been passed into the cavity of the gut. When the bougie has been passed quite through the contracted or prolapsed portion, it should be gently urged on, until the whole instrument is passed beyond the sphincter ani, leaving only a fine soft piece of narrow ribbon protruding at the anus. The bougie so introduced, if it produces no irritation, may be left during the whole night and part of the day, until the patient requires to empty the bowels. On removing it, a natural and better formed evacuation will often follow. When patients are well informed and handy in the use of instruments, I always endeavour to teach them to introduce the bougie for themselves, which they will sometimes effect much more readily than any surgeon, from their own feelings guiding them in its proper direction.

By persevering in the use of this for some time, patients become very adroit, and experience much comfort and relief. In addition to this, it is necessary to empty the bowels with enemata, conveyed through an elastic gum tube of some inches long, which should be introduced into the prolapsed portion of the gut. The common short ivory pipe often fails to convey the injected fluid beyond the lower cavity, and hard fœculent matter

may be detained above the contracted part, which the injection never reaches. When there is much mucous discharge from the lower cavity, the injection of a solution of alum, or the chloride of soda, will be found very beneficial in arresting this discharge, and corrugating and restoring tone to the dilated bowel: opiates and other palliatives may be occasionally resorted to.

But it is time that I should now conclude this communication, which has already much exceeded the limits I proposed. I trust that sufficient has been said to induce others to make observations respecting this unusual course of the large intestine, and the probable diseases to which it may give rise; and I hope, by calling the attention of medical men to an affection of the gut but little understood, that the sufferings of many may be alleviated, if not permanently cured.

I am, Sir,
Your most obedient servant,
HENRY EARLE.

28, George-Street, Sept. 27. 1829.

ACCOUNT
OF A
LIVING DUPLEX CHILD.

Communicated by CHARLES BELL, F.R.S. to whom the letter is addressed.

Teddington, 17th Sept. 1829.

MY DEAR SIR,
A RECENT excursion to Switzerland gave me occasion to see, on the 1st of August last, at Geneva, a remarkable example of a living *lusus naturæ*, or monstrosity in the human frame; namely, twin infants furnished with two heads, two necks, and four arms, but grafted or united side to side, so as to form only one female body, terminating in two legs, or inferior extremities of usual shape. This phenomenon presents nothing disgusting to the beholder; on the contrary, the intelligence which already begins to develop itself in the heads, makes it an object of great interest. I had not the opportunity of a very minute personal examination, in consequence of only seeing it at the hour of its daily exhibition to the public; but my observation verified the accuracy of the subjoined description,

by Mons. F. Mayor, which was published in the *Journal de Genève* of the 30th of July:—

Marie-Terèse Parodi, 32 years of age, the mother of several perfect children, gave birth on the 12th of March of the present year to a double child, now 140 days old. The one to the left was baptized by the name of Christina, the other by that of Harriet.

At the first glance it is perceived that twin infants have become grafted together: however, when they are regarded from before, the lower parts of the body appear simple from the stomach downwards, while the chest is divided at its upper part, at least on one side of the trunk. A more attentive examination speedily enables us to recognise the following peculiarities:—

~~Anteriorly, the chest only appears to form one thorax:~~ the sternum forms a kind of gutter at its inferior part, while above it widens and enlarges very much, in order to give attachment to four well formed clavicles, two of which are fixed at the external angles of that bone, and the other two at the middle of its superior border. Each of these four clavicles is directed towards one of the shoulders, and gives all the support necessary for the movements of the arms, of which two are placed between the heads. The right edge of the sternum appears to give attachment to the right ribs of Harriet, and the left to the corresponding ribs of Christina. There are ~~four~~ ^{two} mammae, the two in the middle being smaller than those which are external to them, and are encroached upon by the arm-pits of the middle set of upper extremities. There is but one umbilicus. When the examination is made from behind, two spinal columns are distinctly seen, sufficiently separated from each other at the upper part of the body; but they approximate towards the sacrum, of which there are two, united by the left edge of the one and right of the other, in such manner, however, that the ossa coccygis are quite distinct. From each vertebral column there arise ribs, which are directed towards each other: the four or five first run to the anterior sternum; but the rest are united to those of the neighbouring body, at least by their external surface, and appear only to form one circle with those of the anterior part of the trunk. Thus,

then, the thoraces are really separated externally throughout their upper third, and probably entirely so within: the posterior ribs of this double trunk participate in the movements of respiration in the same way as those of the anterior part. The beating of the heart in Christina is perceived at the anterior and left surface of the trunk; the beating of the heart in Harriet is seen at the middle part of the posterior surface. Beneath the ribs of this same side there is, between the two spinal columns, an abdomen twice as small as that on the anterior surface of the trunk. Harriet has had from her birth some malformation of the breast, for it is not long since the blueness with which she was affected began to disappear. For some days she has had a catarrhal affection, and her pulse was at 168 in a minute, while her sister enjoyed perfect health, the pulse not exceeding 144 in the minute. Their breathing is not always synchronous; however, there is reason to believe that a communication exists between the lobes of the lungs of the two children. The one sometimes sleeps while the other is awake—sometimes sucks while the other plays, or wishes also to get the breast; but never has one an evacuation without the other making the same efforts, which even wake her, if asleep. As they grow older, other and yet more interesting phenomena will doubtless be observed.

Examples of this kind of union are happily but little common, and it is but rarely that they survive their birth. A good many cases, indeed, are mentioned by authors, but most of them are apocryphal; some, however, are well authenticated; such, for example, as the two Hungarian girls, spoken of by Buffon, who were united by the loins, and who lived 21 years. Another case of a similar kind occurred at Verdun, in 1709: here also two females were united, and in the same manner: they were then seven years of age, and could walk; and their intelligence was so great that they had acquired several languages. There is also an instance in which two little girls were united from the lower part of the sternum to the umbilicus. The accoucheur divided the parts, and thus separated by an operation, the children lived.

In 1495, there were born near Worms, twins united by the forehead: they lived for ten years, when one died,

and the other was separated by an operation; but it proved unavailing. In 1525 a native of Savoy, 30 years of age, and of the ordinary stature, exhibited himself. He had hanging from the sternum a body about a foot in length, having feet and arms, but without motion, while the head appeared as it were planted in the body of the man. In 1533 there was in Bavaria a female mendicant with two heads, who was driven from the country lest the pregnant women should give birth to similar monsters—a fear as imaginary as the result of it was cruel and uncharitable. Buchanan, in his History of Scotland, mentions the case of a monster with two heads, which lived 28 years. The two heads having different volitions, often quarrelled. They both felt wounds of the lower part of the body, but those of the upper part were only perceptible to the corresponding head. In 1552 a French woman at Geneva, was brought to bed of a monster, the heads of which were united by the posterior part, and the union extended to the lower part of the back. Gaspard Materier took a portrait of it. The monster lived some hours, and is compared to Janus by a writer (Lycosthene) who describes it.

Before we conclude we may allude to the opinion which has been frequently started and recently renewed, that such monsters ought to be destroyed immediately after their birth. *No one can have a right to do so*; for since God ordains that such beings should come into the world, the laws owe them protection. Besides, it would be very difficult to determine the degree of imperfection at which an infant would cease to have a right to live; for these phenomena are met with from a simple supernumerary tip of the ear, up to the example above mentioned, of two girls who were successfully separated by an operation.

The catarrhal affection, with febrile excitement, under which the twin named Harriet laboured on Thursday the 28th July, noted by M. Mayor, had subsided on the 1st August, and she then had an appearance as healthy and lively as Christina. Both infants seemed to exercise some control over the motion of the lower limbs; but should they live until their mental faculties and animal powers are further developed, it will become a matter of curious inquiry to ascertain in what manner nervous in-

fluence, springing from two distinct organs of sensation and volition, shall be directed towards the lower extremities, so as to effect locomotion in accordance with the will of each sensorium; or whether there shall be occasional contentions between the *heads* for a dominating power over the *legs*.

Although the precise peculiarities of structure in the abdominal viscera, and the question as to whether the internal organs of generation correspond in unity and simplicity with the external, are points which cannot be fully determined till after death, yet, from the circumstance of each infant taking food with avidity, at different times, it may be inferred that each has its proper stomach, and that the union of the alimentary canal takes place below that organ.

Many facts desirable to be ascertained hereafter, during the growth of this extraordinary animal phenomenon, must arise, referring especially to anatomy and physiology; and as you have been long an eminent professor of these branches of medical science, I am induced to address to you this letter, in the belief that it may invite you to gratify your own zeal, and to indulge that of the profession, by instituting farther inquiries, from time to time, regarding the interesting subject of it.

I remain, my dear Sir,

Very faithfully yours,

J. BORLAND.

NEW OPERATING TABLE.

To the Editor of the London Medical Gazette.

Cheltenham, Sept. 2, 1829.

SIR,

By the recommendation of Sir Astley Cooper, and the known popularity of your work, I am induced to forward you the enclosed, and shall feel obliged if you will give the description and the drawing an early place in your valuable pages.

I am, Sir,

Very truly, yours,

CHARLES AVERILL.

Description of a New Operating Table, in use at the Cheltenham Casualty Hospital, by CHARLES AVERILL, Surgeon to the Institution.

Whoever has witnessed the frequent

performance of surgical operations, either in this country or on the continent, must often have seen, in protracted cases, the inconvenience to which the surgeon has been subjected, and the delay that has been caused by the assistant, from fatigue, becoming unable to afford the requisite support to the patient, behind whom he may have been placed; and a change has, therefore, become necessary. Not only this, but every spectator must also have seen the exhausted state of a patient increased by the close contact with his body of others placed by the surgeon to officiate as assistants. Thus, in cases of amputation in many of our public hospitals, I have often witnessed one assistant sitting behind the patient as a support, a second placed to hold or keep steady the healthy limb, a third and fourth to hold the arms, and a fifth to support the diseased member about to be removed; thus frequently increasing that exhaustion which it is not in their power to relieve. Added to which, when the operation is performed as a *spectacle* intended to convey instruction to pupils, as well as to afford relief to suffering humanity, these numerous assistants prevent many from seeing the different steps of the operation; of which, but from the situation the assistants occupy, a very good view might be obtained. Now although it is not intended, in the description of this operating table, to paint it as possessing any of the comforts of a down bed, still I am sure it will be found to answer the purpose for which it is intended better than any I have ever yet seen; and that it will also prove more calculated, from its construction, to mitigate the sufferings of those who are obliged to seek relief under the knife of the surgeon, than those tables in general use.

The table, of which the accompanying drawings, made by my friend, the Rev. Wm. Brown, afford a very good illustration, is made of oak. Its length is four feet, height two feet six inches, breadth two feet two inches; height of the back-board two feet one inch and a half. Both the table and back-board are covered with leather, beneath which there is a softish padding. On the upper margin, on each side of the table, is a plate of iron, with a channel or groove in it, along which the back-board

can be made to slide until it is at the part where the surgeon may wish to fix it. This is done by passing the iron pins through the holes in the side of the table, as shewn in the drawings. The back-board may be placed either perpendicular or to any degree of obliquity as the surgeon may choose, or the state of the patient require. This is effected by carrying the rack of the back-board backwards or forwards; and it is fixed by means of a screw in the holes on the inner side of the plate of iron, as may be seen in the drawings. The foot-piece, intended for the support of the healthy member, which may be fastened to the leg of the table by a silk handkerchief, can be moved higher or lower, according to the length of the limb; or this with the back-board can be removed altogether. The straps attached to the back-board can be used or not, according to the wish of the patient or surgeon. In cases of lithotomy or amputation, the advantages of a table of this description over those in general use must be obvious to every surgeon accustomed to perform any of the great operations in surgery. The support afforded by the back-board is more uniform and steady than that given by an assistant; the patient is also kept cooler during the operation than if reclining in the arms of another person; consequently he is less liable to faint,—a great and frequent cause of delay in all surgical operations of importance: the position of the body too can be varied with more regularity and precision. When the back-board is removed, the table of course may be used as any other; and from the strength and solidity of its make, it will be found particularly calculated for the support of patients during the use of the pullies in the reduction of dislocations.

I shall not dwell further on any advantages this table may possess, than by saying it has been examined by Sir Astley Cooper, who considers it by far the best constructed of any he has ever seen; and that it is owing to his recommendation I am induced to give it publicity.

It was made, at my suggestion, by a carpenter of this town of the name of Cother, who has received an order for a similar one from Mr. Weiss, of the Strand, whose well-known ingenuity will probably suggest to him some me-

chanical improvement in its construction. In the meantime, should any public institution think proper to order

one of Cother, I shall be happy to be the means of communicating their wishes to him. His price is six guineas.

SOMETHING "TANGIBLE."

To the Editor of the London Medical Gazette.

Sir,

As you will probably not deem it worth while to notice the forlorn attempt at a *jeu d'esprit* in the last number of the

Lancet, (a publication of which, from curiosity to be in at the death, I acknowledge myself to be one of the yet remaining readers,) permit me to call your attention to one peculiarity in the article alluded to. The respectable editor, while he is evidently smarting under the well-merited chastisement which you have recently inflicted on

him*, complains, nevertheless, that there is nothing "tangible" in your remarks. Nothing *tangible*, sir! why what is the plain fact? Wakley denounced a medical practitioner as an impostor, bringing nothing in proof of his charge but the weight of his own unsupported assertion, and the credit of his own professional reputation. The *Gazette* very properly tries Wakley's capacity to give or take away the character of medical men by the only recorded evidence which lets the profession and the public into the secret of his own practice and opportunities; viz. that given in the action which Wakley brought against the Hope Insurance Company, to recover money for losses alleged to have been sustained from the destruction of his house by arson. Since you directed attention to it, I have read the report of the trial in the *Times* of June 22, 1821, and I fully concur with you in thinking it most material that all medical men, whose professional reputation Wakley has attacked, or may hereafter seek to destroy, should peruse these details. You have, with the candour which is characteristic of your publication, abstained from entering into the nature of the evidence adduced by the Hope Insurance Company further than it bore upon the point strictly at issue, namely, the vindication of medical character, by the exposure of Wakley's professional inexperience, and consequent unfitness for the office he had assumed; and by contrasting them with his absurd pretensions, you have afforded such hints as enabled your readers to judge for themselves who was the impostor? It is this forbearance, I suppose, of which Wakley complains as affording him nothing *tangible*; but if he is capable of meeting your facts and inferences, why does he shrink from grappling with them? For my part, I have never seen an attack on a medical man's character answered in a way more *tangible* than that adopted in the *Gazette*, or which would have afforded an honest adversary a better opportunity to substantiate his charge, and thereby defend his own reputation, if he could.

THISTLEWOOD'S HEAD.

Twickenham, Oct. 5, 1829.

* See leading articles, entitled "Attacks on Private Character and Public Institutions."—*GAZETTE*, Nos. 93 & 94.

MEDICAL GAZETTE.

Saturday, Oct. 10, 1829.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum alt, dicendi periculum non recuso."—CICERO.

STATE OF THE MEDICAL PROFESSION.

A NEW medical year has commenced, and its dawn is brighter than that of several which have preceded it. The party who have so long and actively bestirred themselves to sow dissension among the various classes of the profession, are reduced to a number of individuals heretofore well and accurately described by Sallust, as the companions of Cataline, "all who were convicted of crimes or feared conviction—all who lived by perjury—all whom indigence or a guilty conscience disquieted—in a word, all the most necessitous and most daring;" or if we might venture to allude to Jewish history, we should find that they bear no small resemblance to the followers of King David, at the cave of Adullam, "and every one that was in distress, and every one that was in debt, and every one that was discontented."

Well as the system of detraction is now understood, and ill as it has sped, we shall still say a few words in explanation of the present views and avowed designs of the perturbators of our profession, strip them of their only remaining coverings, and expose them to the well-merited scorn of the public they have attempted to deceive, and the profession they are so anxious to degrade.

The startling notes most frequently repeated consist of abuse against the College of Surgeons, and the "certificate system." That some improvement in the laws of the medical corporate bodies is required from time to time, to meet

the necessary alterations in public education, and the increase of public wants, we have never denied; but we believe that such changes should be the result of great deliberation, and made by men well acquainted with the state of all classes of the medical profession. We want no medical constitutions like their political prototypes, the effect of a week's consideration, efficacious only to produce a violent reaction, and rivet still stronger by comparison the fetters of original error. That there is room for improvement we think, and have stated such to be our opinion in the earliest numbers of our journal, and we trust the Council of the College of Surgeons will set about it carefully and fearlessly. Let the friends of moderate reform persevere, notwithstanding their late discomfiture, and let all be open to reason from whatever quarter it may reach them, but unbiassed by clamour, unshaken by violence, and undisturbed by the reiterated abuse of the interested and the profligate.

The universal suffrage system, which would place the election to all offices of trust solely in the hands of demagogues, is almost too absurd to waste our readers' time in considering; and it is needless, for such a system never can, nor will exist. Granting the downfall of the present College (which we regard as altogether hypothetical), we appeal to the calm consideration of our readers, would the profession be benefited by the members of the late meetings at the Freemasons' Tavern being installed in its room? would the profession be honoured or regulated by such a body, heterogeneous in its materials, and although containing some men of talent, some who bid fair to arrive at those honours in their profession which many of the reviled council of the College deservedly possess, yet consisting principally of men who have nothing to lose, and every thing to gain, by such a

change? Is there any hope that moderate and desirable improvements will result from a system of continued and indiscriminate scurrility? Resistance naturally arises to unprovoked aggression, and a frame and temper of mind are produced least of all likely to cause enactments calculated to extend the benefit and raise the character of the profession. Look at the result when parliament last year was on the point of ameliorating the greatest evil in the profession—the law against dissection. When science might have been promoted, and the necessity obviated for shocking any longer public feeling and public decency, the party opposed the measure with all their endeavours, because it gave power to the College; the College, forgetting its importance, almost its necessity for humanity and for the largest and most desolate class—the poor—were content to refuse the boon which the legislature offered, because the entire control was not vested in themselves. These are the consequences, the fatal consequences, of such dissensions—strife, envy, inordinate love of power. Would it not have been better that the law should have passed, which set the anatomist free from legal reproof, and removed the brand from his forehead, but above all, which saved the poor and destitute from the fear of being murdered for their mortal tenement,—even with the *overwhelming* disadvantage of placing some control over its exercise in the hands of the Council of the College of Surgeons?

We quit this painful topic—painful to all who really love their profession—and proceed to the next favourite theme of those who would substitute self-instruction for labour, and anarchy for order.

The party object to the certificates of attendance on hospital practice and lectures, because they put money into the pockets of the medical officers of char-

ties; forgetting that, in this nation, money is the measure of successful talents in every class of the community. Neither Byron, the proud nobleman, nor Sir Walter Scott, the elegant scholar and accomplished gentleman, have scorned to derive money from their productions; and the large sums they have received prove the extensive delight which their writings have conferred. But, forsooth, the surgeon and the physician who teach must not receive any remuneration for communicating the knowledge they have acquired by years of laborious study. They alone must be accused of sordid meanness, for receiving an income in return for instruction, in a country where every one, from the highest to the lowest, turns his accomplishments, his science, or his labour, into gold.

Why?—because it suits the party to pander to the excited feelings of those who have been unsuccessful,—who have either grasped at more than they deserved, or who have wasted the time which should have been dedicated to improvement in dissipation—like Pierre to Jaffier, imputing the result of his follies and debaucheries to the oppression of the state.

The corporate bodies must legislate for the whole class over which they respectively preside; and, speaking generally, it is pretty certain men will not learn unless they are compelled to study. The certificate proves they have had the opportunity, and it ought not to be given if this opportunity has been neglected. It is the voucher that time has been spent in learning the art or science, and this is of more importance to the majority, and consequently to society, than the irregular coruscations of untaught genius.

In this respect, then, we think the Society of Apothecaries deserve well of the community. Their regulations, which come fully into operation this

year, are fraught with the greatest good to the numerous and important class over which they preside; and the apothecary who passes under the present system will not only be a man of great practical value to the largest portion of society, but have acquired the foundation of those sciences which, with after care, may rank him among men of the first consideration in the land.

We trust the two other corporate bodies will follow their example, especially in demanding certificates of a longer attendance on hospitals—we care not whether in London or the country. It is within the walls of hospitals, and in the chambers of the sick, that practical information is to be gained; and we hope to see the day when a certificate of two years' attendance on hospital practice will be the minimum required for members of the College of Surgeons, and double that time for those of the College of Physicians. An examination after such certificates (for men may have attended and not profited) would make every thing sure. An approximation to such a system exists: we trust it will be enlarged, and the public thus guaranteed against the impudent assumptions of men who profess to think all usefulness attained if they possess the name, without the accomplishments, knowledge, or practical science, which ought to belong to it.

We shall return to these subjects as often as our adversaries vapour about oppression and reform, and aim at their impudent attempts to entrap the discontented or unwary. We do not expect we shall be called upon frequently. Our endeavours to undeceive have been attended with complete success, nor shall we relax them even under the charge of being wearisome. Well may those who have sought by slander, detraction, and libel, to pervert the public taste, bring this charge against us. The wholesome aliment of the human frame is insipid

to those whose palate, vitiated by intemperance, can only relish those stimulative viands which make more manifest the loathsome diseases of their bodies; and we should have heard no charge of being wearisome if we had followed their example, and from time to time polluted our pages with false facts, scurrilous insinuations, and ribald jests, instead of overthrowing their arguments, denouncing their ignorance, and exposing their hypocrisy.

MEETING OF THE "BAT-CLUB."

FOR once in our lives we have to thank the Editor of the *Lancet* for a benefit, and, more wonderful still, for a politeness: a benefit in advertising our Journal in such a way as to shew how hard he is pressed by its success—and a politeness, in calling it by its right name. We allude to a squib in his last Number, giving a full and particular account of a meeting (which was never held) by what he calls the Bat-Club. What would the Editor of the *Lancet* not give that his statements were true—what would he not sacrifice, to get rid of this hated "excrecence," which has grown to such formidable dimensions? To speak professionally, what would he not do, could he but hope it would at length slough off, and leave him at rest, even though disfigured by the many scars which his ineffectual attempts at its extirpation have produced? He says it is "malignant:" alas! does he not know that such growths are not easy of removal, but increase most rapidly when fed by the corrupt juices of a broken, sinking, and vitiated system? Whether he be right in saying that the "excrecence" is of "malignant" character, we must leave it for others to decide: most people, we believe, think this is merely alleged by a disappointed individual, to account for its increasing size, which he has been unable to prevent, and can no longer conceal.

MIDDLESEX HOSPITAL.

ALTHOUGH the statement made by "John Middlesex," with regard to the attendance of pupils at Middlesex Hospital; is, as we stated, correct, yet his letter contains an important mistake:

instead of saying that the terms are lower than at "any other hospital," it ought to have been, lower than at "many other hospitals." The terms, in reality, are lower both at St. George's and the Westminster.

MR. KEY'S INTRODUCTORY LECTURE.

AN extraordinary scene took place at Guy's on Monday evening, when an attempt (the result of much previous preparation) was made to excite a clamour against Mr. Key. At present we shall only say, that the lecturer was received by his class in a manner which must have been as gratifying to his feelings as it was honourable to his pupils, and mortifying to the covert, *but not unknown*, instigators of the plot.

HOSPITAL REPORTS.

LA CHARITÉ.

Extirpation of the Uterus.

SINCE we reported, in a recent number, the case in which M. Recamier extirpated the uterus at the Hotel Dieu in Paris, this formidable operation has been performed by M. Roux twice—viz. on the 20th and 25th of September. The first of these cases occurred in private practice, and the latter in the hospital.

L—, aged 38, entered La Charité the 25th of August, labouring under an organic disease of the uterus. She had married at twenty-two, and had had five infants, the youngest being six years old. Four years ago she began to experience wandering pains about the uterus. These had become more acute during the last six months, and the patient had a very abundant bloody discharge; six weeks before her admission into the hospital the flow had been very considerable. The menses, for the first time, were absent at their proper period, the middle of September. Examination, per vaginam, had discovered a disorganization of the neck of the uterus, which was very hard, unequal, and with deep fissures; in addition to which the exploration detected a very considerable tumefaction of the body of the uterus—circumstances which were verified by several practitioners.

Sept. 25.—M. Roux performed the

operation in the presence of M. Boyer, MM. Lermnier, Fouquier, and Recamier, besides a great concourse of pupils and practitioners assembled in the theatre, a circumstance strongly censured by the reporter, who otherwise is favorable to M. Roux. The patient being placed as for the operation of lithotomy—first, the uterus was easily brought down as low as the vulva, by means of a pair of forceps; secondly, the vagina was divided, and the anterior surface of the uterus separated from the posterior surface of the bladder; thirdly, the perineum was opened; fourthly, the opening was enlarged at the sides with a probe-pointed bistoury; fifthly, either on account of the volume of the uterus, which was augmented, or from the shortness of the operator's finger, M. Roux had some difficulty, and occupied some time, in reaching the fundus, so as to divide the superior part of the ligaments; sixthly, the operator for a moment thought of increasing the depression of the uterus with Blundell's crochet, but he afterwards abandoned this idea. Seventhly, the upper part of the broad ligaments was divided. Eighthly, two ligatures were placed upon the lower part of the broad ligaments. Ninthly, the size of the body of the uterus preventing it from passing the entrance of the vagina, great delay took place in producing anteversion of the organ: M. Roux made many efforts, and M. Recamier, then assisting him, the uterus burst forth, covering the operators with blood. Tenthly, after the exit of the body of the uterus, the lower part of the broad ligaments was divided, as were the round ligaments, and the neck of the uterus was separated from the rectum. Eleventhly, on tightening the ligatures, that on the right side broke, and was not replaced. The operation lasted twenty-nine minutes.

The difficulty of effecting the anteversion of the uterus led some to think that the retroversion, after the manner of Blundell, would perhaps have been preferable.

The lips of the os uteri were tumified, nodulated, and separated by fissures, at the bottom of which the mucous membrane was already excoriated. The body of the uterus was about two inches and a quarter at its greatest breadth, and the length from the os uteri to the fundus exceeded four inches. The uterus was uniformly

hypertrophied, and its substance altered in colour and texture.

The patient, when she was removed to bed, was extremely pale, and her pulse concentrated; but little blood escaped by the wound. Compresses, dipped in cold water, were placed on abdomen and vulva, and were frequently renewed. Soon after there was some bleeding, but which (says the reporter) was much more calculated to prevent inflammation than to cause death;—nevertheless, the unfortunate patient did die. About ten o'clock at night extreme prostration came on, which lasted all night, and she sunk next morning, 24 hours after the operation.

The examination after death discovered a little blood in the pelvis, and some redness of the peritoneum at the same place, as if from imbibition. There was no distinct trace of actual inflammation: the bladder and rectum were perfectly entire. No other phenomenon worthy of remark, and nothing explanatory of the fatal result, was detected.—*La Clinique*.

Quere.—What were the symptoms in the above case which warranted the operation?—Ed. G.

GUY'S HOSPITAL.

Injury to the Knee-Joint—Amputation.

W. R. æt. 24, was admitted into Accident ward on Aug. 9, 1829, under the care of Mr. Key. He stated that about six months ago, when driving a cabriolet, the horse ran away, and coming in contact with a cart in Bermoudsey-Street, he was thrown out, and his knee struck forcibly against the curbstone. On rising, he ran after his horse for some distance, but finding his knee become stiff and painful, he came to the hospital. The knee was hot, painful, and much tumefied, but without any wound. Mr. Morgan, under whose care he was then admitted, directed leeches, cold lotion, and the diligent maintenance of the recumbent posture, under which treatment he recovered so as to be able to leave the house in about three weeks, with perfect motion and freedom from pain in the joint. He returned to his employment as a hackney-coachman, and in the performance of his duties was of course much exposed to cold and wet. In the month of May a tumor appeared above the knee, and he again applied to the hospital. It was necessary to open this tumor, and subsequently others, which allowed the exit

of considerable quantities of pus. Antiphlogistic measures were again pursued, and with similar good effects. He again resumed his employment for one or two months, but on August 9th was compelled once more to enter the hospital, under the care of Mr. Key. The opening which had been made above the joint, presented the usual fungatory edges of a fistulous sinus in such a situation, but from the absence of fever and constitutional disturbance, it seemed doubtful whether the joint was opened by ulceration. It was larger than natural, and slightly painful on pressure. He became much depressed in power, and the tendency to suppuration in the surrounding soft parts, increased. Under his great exhaustion, the matter burrowed, in spite of pressure and supporting diet, half way up the thigh, and also along the calf of the leg; and the powers of the constitution sinking, amputation was proposed, and performed by Mr. K. September 15th. It should be mentioned, that as soon as the matter began to burrow in the extensive manner shewn by the dissection of the limb, Mr. K. suspected the abscesses to be connected with the joint, and before the operation ascertained the fact by the introduction of a probe.

On inspecting the amputated limb, which was much tumefied, an opening with fungous edges was observed on the fibular side of the patella, which extended into the synovial cavity. By dividing the integuments of the ham, a large abscess was exposed, occupying the back of the leg. Ulceration had burrowed in the cellular membrane surrounding the gastrocnemius externus, thence between the superficial and deep layers of muscles round the head of the fibula, under the external head of the gastrocnemius internus, nearly extending to the commencement of the tendon of the gastrocnemii muscles downwards, and in front to the tibial side of the fibula.

In the thigh an abscess was found occupying the cellular tissue connecting the rectus and crureus muscles, which had communicated with the joint by a large opening situated between the tendons of the extensor muscles of the thigh and the femur.

Proceeding to examine the synovial cavity itself, its membrane was found exceedingly vascular, and so pulpy or villous as to have a granulated appearance. This was especially observable where the synovial membrane is reflected from the inner condyle of the femur to the edge of the tibia; and the condyles of the femur, where resting on the tibia, were extensively ulcerated, but without any defined edge; thus corroborating Mr. Key's remark, that the cartilage of joints is sometimes found chiefly diseased where opposed to the most vascular part of the inflamed capsule, as though the process of ulceration had been effected

by the membrane itself. That part of the cartilage covering the extremity of the femur, which is opposed to the patella, was most healthy. The cartilage of the patella was decidedly softer than natural. On the outer condyle, and exactly opposite the opening into the joint, there was a shelving depression, about three lines long, having a sharp defined edge. Ulceration had also extended its ravages to that part of the head of the tibia which is covered by the inner inter-articular cartilage. The ligamentocartilaginous structure was unusually small, and rather scabrous on its under surface.

The outer articular cartilage had, only in a very limited degree, partaken in the severe ravages of the disease which had been going on within the joint. Sinuous openings connected the abscesses in the back of the leg, in the thigh, and the joint severally.

Hypertrophy of the Mammaræ.

M. B. age 13½, light complexion, blue eyes, and of a more womanly aspect than her years would indicate, was admitted into Martha's ward on the 16th Sept. 1829, for a precocious enlargement of both mammaræ.

The following is the account she gives of the case:—About six months ago, being in good health, she felt a shooting pain in the breasts, which she observed then for the first time to be slightly enlarged and very hard. This hardness and pain decreased, but the breasts enlarged to the size of a child's head in the short space of about three months from that time, without any inconvenience having been experienced by her except that arising from their bulk. About a month after this she went to Sir A. Cooper, who gave her some aperient medicine, and applied pressure and bandages to the part. Under this treatment the enlargement seemed somewhat to subside, but not very much, and she is admitted here for the purpose of further treatment. Both breasts appear to be in a state of simple hypertrophy, with no disease of any importance evident. They are soft, and in every respect like those of a woman who has borne several children. Their bulk is the only source of inconvenience. They measure about 16 inches in circumference.

On the day (six months ago) when this enlargement commenced, she had a first appearance of the menses, which have since recurred at irregular intervals of four, five, and six weeks.

She states herself honestly to be free from all sexual inclinations; although the external organs of generation appear to be developed; and the account given by those who have known her, and watched her conduct, confirm the moral state of her feelings.

Since her admission, she has taken 5 grs.

of Pil. Ferri Co. twice a-day, to act on the uterus; has rubbed into the swellings about 3j. of Ungt. Potass. Hydriot. once a-day, and has supported them by bandages. They appear to be somewhat diminished in bulk from this treatment.

ST. THOMAS'S HOSPITAL.

Extensive Sloughing Sore on the Fore-arm.

JAMES SAILLITOR, twenty-four years of age, was admitted into King's Ward, under the care of Mr. Tyrrell, on the 11th of June; of rather pale complexion, and reduced in flesh, but has the appearance of having been rather a stout, fine young man. He states that, about a month previous to his admission, he was bled in the right arm, for some painful affection of the chest, attended with cough; that three days afterwards inflammation supervened, which quickly spread, and occupied nearly the whole of the extremity. Leeches were applied, and other means resorted to, but without effect; the part suppurated, and discharged a thin ichorous fluid, leaving a small wound at the middle of the back part of the fore-arm, which communicated with a subfascial sinus, and which, on examination with a probe, was found extending upwards nearly as far as the elbow, and downwards nearly as far as the wrist, in the latter direction insinuating between the extensor tendons, and becoming very deep. The introduction of the probe excited great pain and suffering for some considerable time afterwards.

Ordered to keep quiet, and take opening medicine occasionally.

13th.—Sinus laid open to its full extent upwards, and as far as was judged prudent, in the contrary direction; perhaps, in the whole, to the extent of six inches. When laid open, the integuments retracted considerably, laying bare some of the tendons, and exposing a surface of an oval shape, nearly the size of a small hand. The edges of the wound were drawn together slightly, by means of adhesive plaster, and a poultice of linseed meal put over the whole.

To keep his bed, and have a poultice applied.

14th.—Wound easy, and to all appearance doing well.

Cont. Cat. Lini, &c.

16th.—Dressings removed; upper part of the wound united; lower part surrounded by slight inflammation, and appears irritable. Complains of thirst. Pain in his back and head. Has once or twice had slight shiverings. Countenance flushed; tongue dry and furred, rather brown in the middle, and cracked; loss of appetite; restless; urine

high coloured: skin hot and dry; pulse quick, hard, and wiry.

Sumat. Haust. Effervescent. ʒij. Stia qq. horâ. Cont. Cat. Lini. Omit. Empl. Adhesiv.

17th.—Edges of the wound bearing an erysipelatous blush, which is diffused over the whole of the fore-arm and hand, and extending for some distance up the arm along the course of the absorbents. The wound itself has put on a sloughy appearance, and the upper part, previously united, has become opened; the integuments have again retracted, and given to the sore a very formidable aspect. Febrile symptoms very high.

Sumat Stat. Pil. Hyd. Sub. gr. vj. Cont. H. Effer. Stia qq. horâ. Sumat manè H. aperient. ʒij.

18th.—Constitutional symptoms have somewhat subsided. Inflammation of arm not so extensive. Wound now presents one continued slough, and appears even more extensive than yesterday.

Applic. Lot. Sol. Chl. Sod. p. j. ad p. iv. Cont. H. Effervescent.

20th.—Febrile symptoms have very materially abated. Wound more extensive, and presenting a very sloughy, irregular appearance, especially towards the edges. Here and there, over the surface of the sore, are observed small dark red bloody points. Surrounding inflammation still extensive.

Applic. Lot. Liq. Calcis c. Opio—Sumat. 6ta qq. horâ. Sulph. Quinin. gr. ij. Liq. Op. Sed. gtt. x. ex Infus. Rosæ. Sumat. omni noct. Hyd. c. Cret. gr. v.

23d.—Wound very extensive, occupying nearly the whole of the back of the fore-arm. Surface very irregular, and occasionally bleeding; edges of the wound very much elevated. Pulse quick, and rather wiry; thirst, &c. as before.

Applic. Sol. Sod. Chl. (undiluted).

24th.—Less pain in the wound. Inflammation not near so extensive.

Cont. Med. &c. Ordered a pint of porter daily.

25th.—Sloughs separating; edges not so much elevated; inflammation less diffused. Arm still painful up the course of the absorbents.

Cont. Lot. Sol. Chl. Sod. p. j. ad p. v.

29th.—Sloughs are completely removed, and the surface of the sore is granulating. Sleeps well at night. Thirst removed in a great measure. Appetite returning; bowels regular, &c.

Cont. Remed. Ordered a mutton-chop daily.

July 1st.—Wound presents a healthy granulating appearance; bleeds occasionally. Sleeps well. Enjoys his mutton-chop and porter.

Cont. remed.

4th.—Has been going on well, gradually gaining flesh, and recovering his former appearance. Granulations very painful. Ordered to be lightly strapped and rolled.

9th.—Wound nearly healed. Cont. remed. General health much improved. Went out on the 12th. Wound perfectly healed. Stiffness of the fingers, and inability to straighten them when flexed. Ordered to exercise his fingers as much as possible, and to use friction to the back part of the forearm.

Sept. 25.—We saw this patient at the hospital a few days ago, and found that he had recovered considerable power over the fingers, being able to straighten them all when flexed, excepting the middle one.

GLASGOW EYE INFIRMARY.

Traumatic Iritis.

JAMES FINLAY, æt. 21, was admitted on 3d June, 1879, by Mr. Mackenzie. Eight days ago the right eye was struck by a bit of iron, which brought on zonular redness of the sclerotic, discoloration of the iris, contraction and slight haziness of the pupil, dimness of sight, and circumorbital pain, so severe as entirely to prevent rest at night. Had twelve leeches around the eye, and the extract of belladonna applied. To take every night a pill, composed of gr. ij. of calomel, and one of opium.

6th.—Some whitish streaks visible in pupil, but thinks vision a little better. Pain relieved.

Vesicatorium pone aurem dextram.

9th.—Whitish streaks in pupil much less visible; pupil larger; bowels bound.

Sum. Sulph. Mag. 3j.

12th.—Cont Pil. Calomel. et Opii. Repetat. Sulph. Magn.

14th.—Redness abated, and pupil more dilated.

19th.—Still improves. Cont. Pil. 2nd q. q. nocte.

26th.—Almost the only remaining symptom is slight dimness of vision.

Instillatur in ocul. gtt. i. vini opii. Omit Pilula.

Sept. 11th.—Has continued perfectly well. Dismissed cured.

Traumatic Amaurosis.

David Wilson, æt. 10, 28th January, by

Mr. Mackenzie. About the 13th received a blow on the right eye from a boy's fist. On the 23d began to complain of loss of sight in that eye. The pupil moves but slowly; there is a haziness in the humours, and a slight degree of scleritis, marked by the usual zonular redness. Vision appears to be almost entirely gone. Occasional pain in the eye; no headache.

Hirudines xxiv. circum ocul. dext. Capiat. Pilulam Aloes et Hydrargyri. ter in dies. (Aloes, gr. ij. Hydr. gr. iij. in sing. pil.)

29th.—More scleritis, and more pain in the eye. Can distinguish the hand, a pen, and other objects, obscurely. Does not appear to see better, to the right or to the left, than looking directly forwards.

Vesicat. ad latus dextrum. Sum. Sulph. Mag. 3j. q. p.

Feb. 2d.—Scleritis continues. Considerable epiphora; iris a little granular. Mucous discharge well. Sight considerably improved, especially when he looks towards the left.

Cont. Pil. Al. et Hydr.

4th.—Scleritis less; vision improves.

14th.—Can read the whole of the infirmery card.

17th.—Right pupil a little irregular, but lively in its motions, and vision much improved.

23d.—Omitt. Pilula.

26th.—Gutta. Vini. Opii.

27th.—Knows very little difference between the eyes.

April 1st.—A slight musca volitans still appears before the right eye.

Sept. 12th.—Dismissed cured.

Exophthalmos, from Polypus in the Antrum Maxillare.

Feb. 2d, 1878.—James McCulloch, æt. 53.—The right nostril is occupied by a polypus. Cannot state exactly how long it has existed, but has had a feeling of stuffing in that nostril for some years. About six months ago was attacked by supra orbital pain, which darted towards the right side of the head. In a short time after he felt some pricking pain in the region of right antrum, stretching towards the inferior part of the eye, especially when he opened his mouth. This was followed by a swelling at the right side of the nose, which is gradually increasing. There is now exophthalmos to a considerable degree, in a direction forwards, outwards, and upwards. Has had diplopia for the last three weeks. Tears run over the cheek, and the eyelids adhere in the morning. Complains of a want of the sense of taste in the right side of the mouth. Want of sleep in the night, which he attributes to

the supra orbital pain. Pulse natural; bowels bound.

Capt. Olei. Ricini. ʒj. Capt. Tr. Iodinæ, gtt. xii. ter in die.

6th.—A . t. dos. ad gtt. xv.

10th.—Augent. dos. ad gtt. xx. Unguent. Hydr. Præc. Rubr. ad margin s palpebrarum.

18th.—It is discovered that the palate is yielding and elastic on the right side, under the antrum. A small ulcer is observed at the lower part of cornea of the protruded eye.

19th.—To-day the right nostril was cleared of that portion of the polypus contained in it; after which an opening was found between the nostril and antrum, sufficient to admit the end of the finger. The antrum was found completely stuffed with polypus of a medullary texture and white colour.

Omit. Tr. Iodinæ.

24th.—Mr. Mackenzie having made an incision through the integuments over the antrum, it was found that the fungus had produced absorption of the os maxillare, to the extent of half an inch in diameter. Through this opening the polypus was broken down and extracted. The os unguis was found destroyed, and the bony parietes of the antrum throughout diseased. A dossil of lint was introduced into the antrum through the incision. The bleeding stopped easily. The ulcer on the cornea was now cicatrized.

4th March —A profuse discharge of white fetid matter from the internal surface of the antrum. The nose and lachrymal region are much more natural, and the eye more in its place. The antrum was ordered to be injected daily with the following solution—

Rx Chlorid Calcis ʒj. Aquæ lbj. solve.

9th.—All pain had ceased; eye still more in its place; vision improves; and the shape of his face is much more natural. The discharge has lost its fetor, and is less in quantity. To continue the lint and the injection.

18th —Still improves; double vision gone.

27th April.—Very little discharge; vision improving.

Sumat. Pulv Carb. Ferri Præcip. ʒj. ter in dies.

Aug. 5th.—General health and local symptoms go on to improve. On pressing the lachrymal sac, thick white matter issues from the lower puncture, but is diminishing under the use of an injection of nitras argenti solution. The antrum seems contracting, and discharges very little. Water injected by the opening flows out by the nostril.

Sept. 24th, 1829.—M'Culloch still pre-

sents himself occasionally at the infirmary. He is in good health, and the vision perfect. The sense of taste has returned to the right side of the palate. The antrum is still kept open, and he wears in the opening a wooden style, having its head coloured black, so that it resembles a patch. On the whole, the deformity is not great, while it is evident that not only his eye but his life also has been saved by this well-timed operation.

WORCESTER INFIRMARY.

Empye a, with external Tumor.

THOMAS BOOTH, æt. 62, presented himself for admission at the Worcester Infirmary, and was received under the care of Mr. Sheppard, April 5, 1828, with an oblong tumor, about the size of the section of a turkey's egg, situated over the cartilages of the four inferior ribs on the right side, and about four inches below the mamma. The tumor is free from pain, of an irregular form, with a disk of inflammation on three of its most prominent points; it is firmly attached, and immoveable at its base; lobulated and knotty in its feel; somewhat elastic on pressure, and giving the sensation of a fluid in different cysts. He says, in the month of last September he fell on the edge of a hop-kiln, and struck the part severely; the blow, however, did not incapacitate him from going on with his work, that of hop drying; the pain soon abated, when, about two months after the blow, he discovered a small tumor, about the size of a large nut, which has continued to enlarge ever since: handling, at the present time, does not give any pain, and several enlarged vessels are apparent on the surface; to the eye and feel, it has some resemblance to the fungus hæmatodes. About three weeks since he was directed to keep it wet with a strong solution of salt, which he did for four days, and to this he attributes the first appearance of inflammation.

Tuesday, April 8th.—A puncture, with a lancet, was made in the middle of the tumor, when immediately a quantity of fetid pus gushed out, containing an innumerable quantity of hydatids, most of them about the size of small nuts. The integuments now collapsed, but on the patient being desired to cough, the tumor was immediately filled, and pus and hydatids spouted from the wound on every effort to cough; in all, about ten ounces of pus was discharged, filled with hydatids. A small dossil of lint was inserted into the wound, a poultice laid over it, and the man sent to bed.

9th.—He has passed a good night, and is this morning free from pain and fever, but has some tendency to cough: on renewing the poultice, a considerable quantity of the same fetid pus and hydatids were discharged from the wound.

10th.—Complains of pain in the neighbourhood of the wound, which discharges very freely; it is painful on pressure; his face is flushed; has had rigors during the night. Pulse 110; tongue white; cough urgent, with dyspnoea. Fourteen leeches were applied to the painful part, and his bowels were purged.

11th.—Pain and breathing greatly relieved. His bowels are open; tongue white; pulse 100; discharge from the wound very profuse; cough easier.

12th.—Has passed a good night, with refreshing sleep; pain and tenderness much better; pulse 80; discharge less this morning, but its character the same. He takes an inspiration without pain, but not without cough; tongue continues white; skin is rather hot. Twelve leeches were again applied; a bolus with five grains of calomel, and five of antimonial powder, was ordered to be taken directly, to be followed by half an ounce of castor oil, and to take a saline antimonial draught every four hours after the operation of the opening medicine.

On applying the stethoscope above the right nipple, the respiratory murmur was very distinct; below that part it could not be heard. On directing him to cough, the gurgling of fluid was heard in the chest; the left side appeared sound when examined by the same instrument.

14th.—The discharge is lessening; cough very troublesome, with copious expectoration.

16th.—Pulse 80; tongue cleaner; bowels open; has passed a good night; cough easier; expectoration continues; turns himself in bed with more ease; can rest on either side.

23d.—In all respects better; the discharge from the wound thinner, but more copious. He was allowed a little meat to-day, and ordered to have some porter daily.

26th.—He is going on well. The respiratory murmur now heard indistinctly below the right mamma. The discharge is lessening; the tongue is clean; he gets good nights; cough and expectoration much lessened.

June 28th.—He left the Infirmary much improved in his general health; cough was very slight, and the discharge reduced to the quantity of *Ziss*. in the 24 hours.

Booth presented himself at the Infirmary the beginning of June, in the present year. He returned to his labour more than six months since, and in the month of May he worked hard at his usual occupation, that of a woodman, in felling and barking trees. He considers himself in good health, and is able to do as much work as formerly. He has, occasionally, a little discharge from the wound; in all other respects is quite well.

* Midland Reporter.

NOTE FROM MR. WHITE.

To the Editor of the London Medical Gazette.

SIR,

In your Gazette of the 26th of last month, Mr. Costello, in his answer to Mr. Alcock's letter, has stated that he was to have been the bearer of recommendations to me from his friend in Paris, between whom and "Mr. White" a correspondence had been established, and that at length a patient had been procured. I beg to declare that in any correspondence I may have had with any person in Paris, the name of Mr. Costello was never mentioned, and that until some time after the arrival of that gentleman in England, I was not aware of his being in existence.

With respect also to the case to which an allusion has been made, and which appears, by Mr. Costello's account, to have been procured for him, I also declare that no such case was found for him, or any one else.

I am, Sir,

Your obedient servant,

ANTHONY WHITE.

Parliament-street, Oct. 6, 1839.

EPIGRAM.

*Chirurgus & Medico quo distat?—scilicet isto:
Enecat hic succis, enecat ille manū.
Carnifice hoc ambo tantum differre videntur,
Tardius hi faciunt, quod facit ille cito.*

TRANSLATION.

Distinct the Doctor from the Surgeon stands—
One slays with drugs, the other slays with hands:
Of both the only difference from *Jack Ketch* is,
They slowly do what he at once dispatches.

The above brings to our recollection the following satire on

A CONSULTATION.

A single Doctor like a skulker plies,
The patient lingers, and by inches dies;
But two physicians, like a pair of oars,
Waft him with swiftness to the Stygian shores.

ERRATA.

In our last number, page 23, for "*Ecclesiast*," read "*Ecclesia*;" and, page 32, in Baron Heurteloup's note, for "*Mr. Woltre*," read "*Mr. Wattie*."

W. WILSON, Printer, 37, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 17, 1829.

LECTURES ON SURGERY,
Delivered at St. Bartholomew's Hospital,
BY WILLIAM LAWRENCE, F.R.S.

LECTURE III.—Oct. 5.

On the Nature and Classification of Diseases.

I ENDEAVOURED, gentlemen, in my last lecture, to give you a general notion of diseases;—I represented to you that they might be defined to be a deviation from the healthy or regular state of any solid or fluid of the body, or of any function; not, however, meaning thereby that the function could be disordered without a change in the condition of the organ that executed it. With regard to the question, whether fluids could be altered without some change in the solid parts of the body, I considered it to be hitherto undecided. I spoke to you of the difference between organic and functional diseases, regarding the former as comprehending all those cases in which some recognizable change after death is observed in the organization of the part, and arranging under the latter those instances in which no such change can be ascertained, but in which, however, we cannot entertain a doubt that a change must have occurred in the living condition of the part, as we cannot suppose that the function can be altered without some change in the state of the organ which is the cause of that function. I mentioned to you that I could not admit the notion of functional diseases, considered as independent of the organs by which they are exercised, as it seemed to me to involve the idea of an effect without a cause; and I farther held this notion to be objectionable, as leading to injurious practical consequences. This I attempted to illustrate from the views entertained respecting the nature of palsy, and the treatment adopted under the notion of that disease, consisting in a diminished, or reduced state of the nervous power of the part.

98.—v.

I alluded to some particulars in reference to the treatment of impaired vision; to the notion of debility in fevers, and to the idea of indigestion in affections of the stomach. I observed farther that I considered that all the organs of the body might be primarily diseased—that is, each organ may be disturbed by a cause which is applied to it in the execution of its peculiar functions; next, that all the organs may be secondarily diseased—that is, they may be diseased in consequence of derangement previously existing in some other part: these two kinds of disturbance being respectively called primary and secondary, idiopathic and sympathetic. I observed that the words sympathy and sympathetic did not explain how the phenomenon occurred, but that they merely pointed out the fact of the co existence of certain affections; that one part suffers with, or at the same time as another—this is precisely the meaning of the word sympathy.

I come next to speak of the difference in the nature of diseases. We have to determine not only what organ of the body is diseased, but also how it is affected; in what way it deviates from the healthy or regular state;—and this is a part of the subject which I am sorry to say is still involved in considerable obscurity. Our notions of the ways and modes in which the organs are disturbed, are hitherto imperfect. Probably there are many ways in which they may be affected, of which we have hitherto no idea.

In the great majority of cases, diseases depend upon increased action of the parts. We have to consider, in the first place, the original inflammation, and in the next place, the more or less considerable changes which inflammation, by its continuance and progress, is capable of producing in the structure of the parts. Now inflammations are not all of one kind, and there is one leading distinction which it is necessary to notice in adverting thus generally to the disease. Inflammation is

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divided into *common* and *specific*: common inflammation is produced by an ordinary cause of disease acting on a healthy constitution. A wound, for instance, inflicted on a person in good health, will cause inflammation of a common kind and form. Other external agents would in the same way produce inflammation of a similar character. Specific diseases are those in which the constitution of the patient is unhealthy, the deviation from a state of health being either hereditary or acquired. Examples of this occur in scrofula, gout, and rheumatism, or in inflammation produced by one definite and specific cause, as in syphilis, small-pox, measles, scarlet fever, and contagious diseases generally: all these examples of disease can be produced by one particular cause, and by no other. Specific diseases, therefore, are peculiar in consequence of the constitution of the individual in whom the inflammation occurs, or in consequence of the nature of the cause applied. Now specific inflammation, thus excited, is nearly similar to inflammation that is excited by a common cause, at least the only difference consists in its modification; and frequently specific inflammation is so much like common inflammation, that difficulty is experienced in distinguishing the one from the other. We might often be unable, from the appearances, to distinguish between syphilitic bubo and enlarged glands in the groin caused by common inflammation.

Having heard that diseases generally consist in a state of increased action of the parts, you will naturally inquire whether there are not other classes of disease that arise from opposite causes—namely, diminished or reduced action of the parts; and you will probably have so frequently heard and read of debility, and of the means to be adopted to raise the powers of the system, that you perhaps think a considerable class of diseases are of this character. I believe we can hardly say any thing satisfactory or clear as to debility, considered as a *cause* of disease. It is true that debility is very frequently met with as a *consequence* of disease. The alterations that are produced by disease in a part render it more or less unfit for carrying on its functions. But we can in few instances recognize the state of debility in a part as the cause of disease, in the same way that we see a state of increased action to be the cause of those disturbances called inflammation. It is true, if cold be applied for a considerable time to a part it will reduce the action of that part, and the reduction may be carried to such an extent as ultimately to put a stop to vital action. The ossification of the arteries in the extremities of old persons seems, in a somewhat similar manner, to give rise to mortification in the extremity of the body. But the debility which we so frequently talk of

and read of is to be regarded as the effect of disease; and therefore it cannot be laid down as a general cause of disease. In considering the nature of diseases, debility is contradistinguished to increased action.

Many diseases produce a complete change in the organization of the part which they affect: these are called organic changes. In many instances they appear to convert the organ into a texture quite of a new kind, so that perhaps you see scarcely any trace of the original composition of the part itself. Examples of this occur in fungus hæmatodes, and in tubercles in various parts of the body, such as those which take place in the lungs. It often happens that the phenomena of these organic changes are assimilated, in a great measure, to those of inflammation—that is, with the increased action of the part, there will be a distention of the vessels; but this is by no means universal. Frequently changes of structure take place in a slow, insensible manner, and without the characteristics belonging to inflammation; so that we cannot refer them to the same kind of action. In cases of phthisis, depending on the formation of tubercles in the lungs, these often proceed till they occupy nearly the whole of the lungs, with very few symptoms that are perceptible.

The next general head is what we have already referred to—functional derangement. That is a kind of division which we merely take in consequence of our ignorance respecting the nature of many of these diseases. We see the function of a part deranged, and we lay it down as a head of disease, without understanding exactly what is the cause of the derangement. I believe you will find, that if you take any particular organ, and put together all that you can say respecting it under the several heads now mentioned, you will exhaust nearly all that can possibly be said about diseases. Suppose we take the eye, and consider, in the first place, the effects of a blow or injury of the organ; secondly, inflammation, divided into two heads, common and specific; thirdly, the consequences of inflammation; fourthly, the organic changes; fifthly, the functional derangement;—we shall find scarcely any thing that can be said about the diseases of the eye, that is not referable to one or other of these heads. However, as we may find some things that do not come under these, we constitute another head—sundries; and, in fact, in diseases of the eye, we have a manifest example, for cataract of the chrystalline lens cannot be referred to any of the heads that we have now mentioned. I think it better to adopt a division of this kind, because we do not thereby go beyond the extent of our knowledge; and when we look to matters referred to this division, we see in what

we are ignorant, and point them out as subjects of future investigation. I think it is better not to pretend to be informed upon a subject of which we have no knowledge. When we do not understand the nature of a disease, it is better to acknowledge the fact at once, and leave it for further investigation, rather than to take up an imaginary and theoretical opinion, and suppose that it accounts for appearances of which we are, in fact, ignorant.

When we have observed what is the state and nature of a disease, we are entitled to give it a name that is clear and expressive, and which shall at once indicate the disease itself. There are many diseases that are named in this way—thus cephalitis, iritis, gastritis, nephritis: these denote inflammation of the respective parts, the termination *itis* being chosen to designate the state of the organ, and the former part of the word the organ itself. These names indicate the particular kind of disease, gastritis—inflammation of the stomach, and all such names, expressing both the seat and the nature of the derangement. In a great many instances our knowledge is too imperfect to admit of diseases being named in this way, and then they are designated according to some particular circumstance that is clear to our observation: thus we have diarrhoea, dysentery, cholera. Frequently the circumstance according to which the disease is named is the change in the sensation of the part—for instance, gastrodynia,—pain in the stomach; or from discharge of some kind of fluid, as hæmoptysis, spitting of blood; hæmatemesis, vomiting of blood; diabetes, increased flow of urine, &c. All these pass in nosology as so many diseases; but, in point of fact, they are merely names of the symptoms of disease, and these names are to be considered as indicating the deficiency of our knowledge as to which organ is diseased. We should, of course, adopt the names that appear to denote the organic change; but being ignorant of this, we apply the name to some particular or leading symptom.

We come next to consider the arrangement, or classification of diseases; and this, in a subject so extensive and complicated as medicine, is a matter of very considerable consequence. I need not observe that in any subject in which a great number of parts are to be considered, the methodical distribution of these parts very much lessens the labour both of the learner and the teacher. If a person should at once take up the question of disease, and enter upon it without any kind of method, it would become overpowering. He would fall into a labyrinth, in which he would wander about without a guide. The variety of diseases is very great, and if you regard

their number merely, you might at the outset of your course despair of being able to understand such a multiplicity of different maladies.

The individual organs of the body are numerous, each of which is liable to be diseased in various ways; and every particular affection of an organ has its name, and is to be regarded, in point of fact, as a disease. Not only have all the various organs to be considered in this way as liable to disease, but in a great many instances a particular organ is made up of many component parts, and each component part is liable to a particular form of derangement; and all these derangements have received names, and appear in nosologies as diseases. Now take the case of the eye—I believe, in consequence of that part being open to external observation, and in consequence of its structure being complex, there are about 200 diseases, or rather more, enumerated by some nosologists as occurring in it alone; you must not, therefore, be surprised to find that when the diseases of the body are enumerated, they are reckoned up by thousands. The study of disease is not, however, such a complicated and endless subject as this view of the ample catalogue of names would lead you to expect. I mentioned to you in my introductory lecture, that although the individual organs of the body are numerous, the component tissues, or organic elements, of which it is built up, are few; in fact, the basis or ground-work of nearly all the organs of the body, consists of cellular membrane, blood-vessels, absorbents, and nerves. It is the various proportions in which this admixture is combined with some other structure less general, that make the difference of the various organs; hence, as the essential basis of the structure, or ground-work of the organs, is the same throughout, so the morbid affection must be similar. It is true that disease differs in the various organs of the body; but it is a difference of form, a difference of modification—its essential nature is nearly the same throughout.

That part of the science of medicine which considers names, and the distribution of diseases into classes, is technically called *Nosology*. Diseases have sometimes been considered topographically, that is, according to their situation in the body; and old writers have generally treated them in this way, beginning with diseases of the head, and descending to the other parts of the body. This, at all events, does not involve any technical ground of confusion—does not lead to error; it leads, however, to tediousness, because the various parts of the body are liable to similar affections, and if you describe them as they appear in each part, you must go over the ground

again and again. An abscess is the same whether it is formed in the head, the chest, or the limbs; and the same remark will apply to other affections. Medical nosologists have generally founded their arrangements on the nature of diseases, and their efforts have, in general, been very unsuccessful; because the nature of diseases, as I have already pointed out, is imperfectly known. Most of these nosologists have been but imperfectly acquainted with anatomy and physiology, and therefore their distinctions, so far as they go, have in most instances been fanciful, and have been founded on particular doctrines and symptoms, which will not bear examination; and, consequently, most of these persons, instead of rendering the subject clearer, will be found to have introduced mere names, which have left it more obscure.

Great advantage has been derived from arrangement in the study of natural history. A great man in the last century (Linnæus, of Sweden) employed himself in arranging all the productions of nature according to a certain method and order, in which he brought them together, so far as his knowledge extended, according to their natural affinities, and distinguished them according to their natural differences. The success which attended his efforts in natural history, led to the adoption of a similar method in the arrangement of diseases. A nosology was published by a French physician, (Sauvages) in which diseases were arranged in species and genera, and were combined in orders and classes, much in the same way that Linnæus arranged plants and animals, and other productions of nature. This arrangement of diseases by Sauvages included 10 classes, about 300 genera, and above 4000 species. The example of Sauvages was followed by others, and various systems of nosology were published, which I need not dwell upon at length, for they are now, as they deserve, nearly forgotten. Dr. Cullen, of Edinburgh, published a system of nosology, which was generally adopted, and is still maintained in this country; and which has sometimes been stated to be one of the best of the kind. Yet we find, upon examining it, that diseases are brought together which have no natural affinity; and that in many instances those are separated and put into different classes which resemble each other: so that if Cullen's nosology be the best arrangement of diseases, all that we can say is—bad is the best. Under the head of *Cachexiæ*, which is one of his classes, and which he defines to be depraved habit of body, he has the order *intumescentiæ*, or swelling; in which he has brought together *polysarcia*, excessive fatness; *pneumatosis*, distention of the chest with air; *tympanites*, distention of the intestines; *ascites*, dropsy of the

belly; *hydrocele*, distention of the scrotum with water! The diseases which are brought together under other orders will be found to be the worst possible examples of arrangement—equally unfortunate as that I have mentioned. Regarding this as one of the most successful examples of nosology, I think we may safely dismiss all of them from further consideration. I conceive it to be a sign of sounder ideas upon the subject that these systems of nosology have fallen into disuse, and that they have met pretty much with the contempt they deserve.

It is in vain to attempt to class diseases on the same principles that we follow in the arrangement of the productions of nature, because the two cases are by no means analogous. The species of natural objects are distinctly marked out by the hand of nature, and there can be no difficulty in placing them together. No one could confound the dog, the cat, the ox, the sheep, the lion, the tiger, and so forth; but when we come to examine into what are called the species of disease, we find that instead of being different, like those of animals, they run into each other by insensible gradations, so that it is extremely difficult to point out the distinctions between them. We are constantly meeting with effects of disease that are not describable in any form; and it is a common observation, that diseases which we meet with in nature are very little like those we read of in books. Thus the primary grounds of division are wanting in the nosological species of disease. Such primary distinctions are quite clear and definite in natural history; but they are altogether wanting, or are very obscure and indefinite, in disease. Then if we come to the division of genera, orders, and classes, the structure and economy of animals is well known, and hence leading circumstances can be adopted as the ground of separate division in their natural history. For example, a certain description of animal feeds on vegetables, and nutrition is conducted on a plan called *ruminating*, or chewing the cud;—another class feed on animal food, and they pursue a very different mode. Thus you have two natural classes in animals; those called *ruminating*, that chew the cud, and the *carnivorous*, or those that feed on their prey: and in reference to the economy of animals, the plan of their structure is arranged accordingly. You know, therefore, when you hear that the animal is referred to either of these classes, almost all the leading circumstances about its economy even before you are acquainted with the animal itself. If we could construct a nosology of diseases upon this plan, it would be of great assistance in teaching. If we could form classes founded on such well-known circumstances, it would lead to the study of diseases in regular order, and thus it would facilitate the labour of learning.

But when we look to the arrangement of Cullen—suppose we take tumors, we find put together aneurism, varix, ecchymoma, schirrus, cancer, bubo, sarcoma, warts and corns, &c.; in fact, he converts into a disease a tumor of a part without inflicting wound or injury—a pregnant uterus (a laugh). This is an arrangement founded upon elucidating things in a natural order. He has a head, *Dyalyses*—solution of continuity, under which you find *vulnus* a wound, *ulcus* an ulcer, *herpes* tetters, *psora* or itch; and the truth is, these are only examples of the kind of arrangement which is found throughout this celebrated system, and yet, strange as it is, I believe that in some institutions students are not eligible to be examined, touching their other qualifications, before they have been questioned as to their knowledge of Cullen's *Nosology*. Thus, it is required that a person should have his mind filled up with trash and rubbish. If real knowledge be acquired, it is very well, but it were much better to leave the mind empty than to fill it up with stuff of this kind.

Now, as diseases, for the most part, consist of changes in the state of the organs, the proper ground of distinction would be anatomy; at all events, it would be a ground of distinction that would not involve any error. There are two things to be considered in anatomy. There is the anatomy of form and position, and there is the anatomy of texture. The former is called descriptive, and the latter is called general anatomy. The latter, the anatomy of the texture, is that which shews the composition of the organs: it is a kind of analysis, reducing these into their constituent elements. A man of extraordinary genius, who lived in a neighbouring country, Bichât, and who died at the age of thirty-three, but left behind him a name that will live as long as the science he cultivated, in a work called "*Anatomie Générale*," has explained the anatomy of structure. He has reduced the organs of the body to their original component elements. He has, as far as it could be done, determined the nature of the constituent parts. He has shewn the proportions in which they enter into the organs of the body. He has subjected them to every kind of analysis, anatomical and chemical. In short, he has produced a work which is truly extraordinary, when you consider that it is the production of a man who died at so early an age—when you consider the novelty of his views, the great number of new facts he relates, the very clear manner in which he unfolds his doctrines, and the combinations which he has so beautifully traced. If we knew enough of the elementary or original organic structure of which the body is composed, we could then put down under that head all the va-

rious disturbances of each system, and thus we should have a natural arrangement of the diseases of the part—an arrangement grounded on anatomy. In considering diseases in this way, we should find that a great deal of time would be saved, because, while it explained generally the nature of the affection—the incidents to which original tissues were liable, we should only have in particular cases to point out the local circumstances which belonged to the affection of those parts. Suppose we take the cellular system. Inflammation of this is called phlegmon; proceeding to suppuration, it constitutes abscess. When the phenomena of phlegmon, consisting of inflammation and suppuration, have been once described generally, we need not repeat it in going over the various parts of the body; we should only have to notice in particular instances any local peculiarity. The same may be said of serous membrane, mucous membrane, and all other tissues. But we find it convenient in some cases to describe together diseases that affect particular parts, because it contributes to a clear understanding, and to distinguish from each other the various conditions of complicated organs. This, for example, is the reason of considering together the diseases of the eye.

The arrangement which we purpose to adopt in these lectures is founded on these two considerations; for the most part regarding diseases as occurring in the various organic systems of the body, but in some instances taking up disease as it is seated in particular organs. Although diseases are spoken of under single names, and therefore appear to the mind at first view as single objects, yet we find in general that each particular disease embraces a great variety of circumstances; and that in order to understand them thoroughly you must view them in a number of different lights. In the first place you survey those circumstances which denote the existence of disease, and which may be called generally the external signs of disease. You direct your attention to the circumstances under which the disease has arisen, and you investigate the occurrences that have taken place in particular instances. You next proceed to notice those changes in the state of the affected organ which produce any alteration recognizable by sense. This you can generally ascertain in external organs, and in many cases understand them in the internal organs. You ascertain the alteration in the state of the part first affected, and the alteration of its functions. You also observe the changes which may be produced either in the organs or functions secondarily. These circumstances are called the symptoms of disease—that is, the changes in the state of the part or of its functions which exist at the time you make

LECTURE 2 LECTURE ON SYMPTOMS.

in producing changes in the state of the organs, and they are called direct causes, or exciting causes. Thus, the application of heat to the skin produces inflammation. But what would produce inflammation of the skin without exciting it? There are called remote or disposing causes. Thus, a full meal of rich food, followed by indulgence in strong and stimulating liquors, is a disposing cause of apoplexy of the brain. A person in such a state is liable to have apoplexy if there is the application of certain exciting causes.

You will read much of what is called the proximate cause of disease—*proxima*. It means that which is immediately preceded the production of disease. Now you will observe that disease sometimes is actually traced to an altered condition of certain organs, and when our investigation of the subject is complete, we are able to do this. Therefore, the proximate cause in such cases is the circumstance that produced the altered condition of the organ. In other instances, where our knowledge of disease is imperfect, it relates merely to a certain resemblance of symptoms, and in such cases the altered condition of the organ, when found out, is considered to be the proximate cause of those symptoms. This is the sense in which the word is used by Dr. Cullen: his ideas turn on the symptoms that are exhibited in each case, and not on the changes that are to be observed in the organ: the proximate cause of Cullen is what we should call disease itself.

The division of causes will be best understood by stating a case to you. A certain individual has what is called a sanguineous temperament: he has a short neck, and a full habit of body, produced by indulgence in eating and drinking. This person makes a very hearty dinner or supper; he fills his stomach with food, he takes a considerable quantity of strong drink, and shortly afterwards he falls back in his chair, loses sensation, and has an attack of apoplexy. He either dies almost immediately, or without recovering his senses or voluntary motions, the internal movements...

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partaken would be called by nosologists the occasional cause of the disease. The sanguineous temperament, short neck, and fulness of habit, are the predisposing or remote causes. Thus you perceive that in investigating the mode in which disease is produced, you have often got a series of changes to observe; each of which, in reference to that gone before, and to that which follows, is successively effect and cause.

Having then observed the nature of the case, having noted the existing symptoms, and traced the cause;—having watched the course and progress of the disease, and its termination, we complete our investigation of the subject by opening the body of the patient after death, in case death should occur. This leads us to find out the changes which have been produced in the state of the part immediately affected, or of others connected with it. By dissection we ascertain what may be called the *pathological* condition of every part. The knowledge of this is of great importance towards enabling us to determine the seat and nature of disease. This inquiry into the changes which take place in the organs after death has materially contributed to give us just and correct notions respecting the nature of diseases;—it has dispelled all those fanciful views in which disease was attributed to certain alterations of the fluids, and of the condition of the vital properties; for it has shewn us in most of these that material changes have been produced on the organs diseased. This examination completes the history of disease. In many cases we do not find a change produced in the organ, but even this negative circumstance is of use in detecting error.

Now, important as this examination is, and valuable as is the knowledge which it imparts, you must not consider that it is a matter of the *first* importance. In investigating the nature of diseases, the point of chief consequence is *CLINICAL OBSERVATION*—that is, the ascertaining of all those changes which take place in the state of the organs, or in the condition of the functions, during life. The examination after death completes the history of the case; but it is of subordinate consequence, compared with clinical observation during life. By mere observation we can understand a great deal of the history, origin, causes, progress, and terminations of disease, without examining the bodies at all. It often happens that the nature of disease cannot be ascertained by examination after death; for, in many instances, the patient does not die under its influence, and in others we are not allowed to make the examination; and where we are permitted to do so, we can frequently detect no change. Therefore you will observe that the cases are comparatively few in which direct information can be obtained; and although, in

these, the knowledge is of a very important kind, yet the general doctrine of treatment, and the general mode of curing diseases, have been discovered by experience and observation during life, and not by the discoveries resulting from examination after death. I mention these circumstances to you that, although you may take every opportunity of following that kind of investigation which pathology institutes, you may not entertain an exaggerated notion of it; but may estimate that part, as well as others, exclusively by its real value.

When we examine the symptoms of disease—when we pay particular attention to the changes produced in the condition of the affected part (the primary or local changes)—we are led to distinguish diseases from others that resemble them; we are led to distinguish the diseases of particular organs from those of contiguous parts. The particular act by which we discriminate diseases is the *diagnosis*; the particular sign on which we dwell in making the distinction, is the diagnostic sign: in general, it is the primary or local symptom existing in a part that marks the seat of disease, and that constitutes the diagnosis.

When you are called to investigate the seat of disease, you find the patient and his friends extremely anxious: you find a great desire existing to know whether he will recover, or whether he is likely to die; whether he will recover completely or only imperfectly; how long the disease will last; when he will be able to go about, and resume his occupations. These inquiries are really very natural, and, although you may find them sometimes troublesome, I hope you will be inclined to answer them readily and with kindness. You must make allowances for the anxiety of friends on these occasions, and should not suffer yourselves to be betrayed into any thing like hastiness, or an expression of dissatisfaction. This is, in fact, a point of policy, as well as of good feeling. Few persons can estimate professional knowledge and skill, but all are able to estimate and to value attention and kindness. When you compare the state of the patient as it is under your immediate observation, with all that you know from other sources respecting the nature, progress, termination of disease, and effects of treatment in particular cases, you are then able to prognosticate, or predict, the course and event of the disease in such case. This constitutes what is called *prognosis*; a point of great practical importance.

Having observed the disease in the way I have mentioned, you naturally pass to the consideration of the means by which the disease may be arrested, or may be conducted, through a certain course, to a successful termination. These means fall under three divisions—namely, the management of ex-

the observation. The word symptom means happening with—occurring together; therefore symptoms of disease must be something which you actually see or observe at the time of examining the individual case. The word sign of disease is more comprehensive, because it embraces all the circumstances that have taken place prior to the time of examination. Now the symptoms of disease found in this way are divided into the primary—that is, those changes which occur in the state of the part itself; and secondary, or those that occur in the condition of other organs. Increased redness, swelling, and yellow discharge, are primary symptoms of clap. Increased frequency of making water, or a swelling of the testicles, are secondary symptoms of the same disorder. In looking to the symptoms of disease, practical persons have particularly turned their attention to the discovery of such as would constantly take place in each particular disease, and these have been called *Pathognomonic* symptoms, the meaning of which is, symptoms pointing out individual diseases. Secondary symptoms, for example, cannot be pathognomonic. Even with respect to symptoms that belong to the organs immediately affected, you do not always find them the same. Thus, symptoms may be present, or they may be wanting; so that few come under the description of what may be truly called pathognomonic. These are mostly found in external disease, and are referable to what we ascertain by surgical examination. Thus, for example, if the patient have pain in making water, and the water is interrupted in its passage from the bladder, or if he feel pain on the motion of a carriage, or any other motion of the body, we suspect that he has got a stone in the bladder. But all these symptoms may exist in consequence of other diseases besides stone. If, however, we introduce a metallic instrument into the bladder, and by striking against something it makes a noise there, it is a pathognomonic symptom of stone.

Symptoms have been divided into *local* and *general*: local symptoms are those existing in a part; general symptoms those changes effected on various or several parts. Hence those are called general which take place in conjunction with several different primary affections. The symptoms constituting fever may occur with local inflammation, and also with injuries: they may take place in connexion with numerous other conditions, and therefore do not point out particularly the nature of any disease.

In the investigation of disease we next come to look at the circumstances by which the affection is produced—that is, we examine into the *cause*, which, as you will readily conceive, is a very important part of the inquiry. Some causes act immediately

in producing changes in the state of the organs, and they are called direct, immediate, or *exciting* causes; thus, the application of hot water to the skin produces inflammation. But other causes produce a state of body in which disease is likely to occur without actually giving rise to it. These are called *remote* or *predisposing* causes. Thus, a full state of habit, produced by indulgence in eating and drinking, is a predisposing cause of apoplexy or palsy. A person in such a state is likely to have apoplexy or palsy on the application of certain exciting causes.

You will read much of what is called the proximate cause of disease—*causa proxima*; it means that which has immediately preceded the production of disease. Now you will observe that disease sometimes is actually traced to an altered condition of certain organs, and when our investigation of the subject is complete, we are able to do this. Therefore, the proximate cause in such cases is the circumstance that produced the altered condition of the organ. In other instances, where our knowledge of disease is imperfect, it relates merely to a certain assemblage of symptoms; and in such cases the altered condition of the organ, when found out, is considered to be the proximate cause of those symptoms. This is the sense in which the word is used by Dr. Cullen: his ideas turn on the symptoms that are exhibited in each case, and not on the changes that are to be observed in the organ; the proximate cause of Cullen is what we should call disease itself.

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partaken would be called by nosologists the occasional cause of the disease. The sanguineous temperament, short neck, and fulness of habit, are the predisposing or remote causes. Thus you perceive that in investigating the mode in which disease is produced, you have often got a series of changes to observe; each of which, in reference to that gone before, and to that which follows, is successively effect and cause.

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Having observed the disease in the way I have mentioned, you naturally pass to the consideration of the means by which the disease may be arrested, or may be conducted, through a certain course, to a successful termination. These means fall under three divisions—namely, the management of ex-

ternal influences, which tend to the restoration of health, such as diet, air, exercise, clothing, sleeping, walking, &c. which are called by the name *dietetic*; the second, *pharmaceutical*—the application of internal and external remedies depending upon a knowledge of *materia medica*, and of the changes the diseased organs undergo; the third, *chirurgical*—operations or other manual proceedings: so that you observe surgery is a part of therapeutics, or treatment. The various circumstances connected with disease that I have just mentioned, taken altogether, constitute the science of *pathology*; and the investigation of disease is not complete till you have surveyed it under all these aspects, or varieties. This shews that these subjects have a material bearing upon each other, and your views would be very imperfect unless you surveyed the whole of them. It has sometimes happened that disease has been considered in one or other of these views only, and particular treatises have been written upon them. Such partial views of the subject have been given under especial names: the consideration of nomenclature constitutes *nomenclology*; the consideration of symptoms, *symptomatology*; of causes, *etiology*, &c.;—and there have even been treatises on the art of *diagnosis*. I cannot approve of any of these partial views of disease. It is so necessary to contemplate the subject altogether, and the various parts elucidate each other so materially, that we ought not to attempt to take any particular view, but to consider the whole in conjunction.

I have mentioned to you an observation made respecting the nature of diseases—namely, that in a great majority of cases it consisted in *inflammation*. In point of fact, in giving a course of medical or surgical lectures, we are principally occupied in describing inflammation, and pointing out the mode of treating it. I therefore think that we should begin with this important subject. I have mentioned to you, that the arrangement of diseases I shall adopt will be founded on the different component tissues of the body; but I think it necessary, first, to describe inflammation and treatment as connected with it. It is of particular importance, in a surgical course, in which we have to describe the nature of injuries, and their effects; for these are only modifications of inflammation. You will find that in doing this we shall save both time and trouble. In the subsequent portions of the course we shall have occasion, in describing the tissues, to advert to the general principles laid down on this part of the subject;—I shall, therefore, in my next lecture, call your attention to—
INFLAMMATION.

CLINICAL LECTURE

ON THE

OPERATION OF LARYNGOTOMY.

By CHARLES BELL, Esq.

Surgeon of the Middlesex Hospital, and Professor of Surgery in the University of London.

GENTLEMEN,

AT no time does the duty of the surgeon appear more important than when he comes into the midst of a distressed family, one of whom is in danger of immediate death from suffocation; for the suddenness of the attack, the agony of the sufferer, and the real danger to life, are apt to agitate him at a time when he must be calm, decided, and dexterous. Before I read the case to you, I shall put certain preparations into your hands, to which I must refer in explanation.

[The lecturer here handed round the preparations, showing the natural structure of the larynx, and gave a short description of the anatomy of this part. He then drew attention to the peculiar sensibility residing in the glottis.]

This sensibility of the glottis calls into action the whole class of respiratory muscles. It is placed here for the purpose of guarding the entrance of the lungs; and if the smallest husk, or crumb of bread, alight upon this part, there is an immediate spasm, extending through all these muscles, to expel the foreign body. But just in the same manner that this extensive class is roused into action, those little muscles which move the arytenoid cartilages and the *cordæ vocales*, contract spasmodically. Whenever any thing foreign touches the highly-irritable spot in the glottis, these muscles shut up the narrow slit of the *rima glottidis*, and cause the sensation of suffocation. In such a case, therefore, as the present, when a foreign body is lodged in the windpipe, we have to observe that there is, at first, a sudden spasm, or fit of suffocation: after a time, this painful struggle relaxes; but it returns, and this return of the difficult breathing marks that the obstruction is spasmodic, and not mechanical.

In the course of the attack, these fits recur at shorter intervals—they become more frequent, though apparently less

violent; and you will observe how they are attended with flushing and turgescence of the face, with a blood-shot eye, great anxiety and struggling. But by-and-by a change takes place—there is now no struggle, nor any effort to avoid suffocation—there is no longer that animated and terrified look; but, on the contrary, the patient lies still: instead of the suffused face, his cheek is pale and cold, and his hand feels clammy. Had the obstruction been altogether mechanical, the effects would be uniform; but being, as I have said, spasmodic, there is a deceptive appearance of improvement from diminished irritability. Seeing this change in his condition, his attendants think that he is relieved, and in the way of doing well; when, in truth, his case is desperate. These new symptoms arise from effusion taking place in the lungs. The difficulty experienced of drawing the breath through the narrow glottis, and the violent mechanical play of the lungs, bring on effusion into the extremities of the bronchiæ, or into the common cellular texture of the lungs; and of this, the pale leucophlegmatic countenance is the sign.

Thus, when the patient dies, the immediate cause of death is the state of the lungs; the remote cause is the spasm in the glottis. The inference which you are to draw from this is, that if you do not decide at the first what is to be done, but defer operating, there is danger of being too late: you may perform the operation, and remove the foreign body, but the patient will die from the effusion into the lungs.

Case of Foreign Body in the Trachea.

Sept. 1.—Mary Waters, æt. 9, was admitted into the hospital at nine o'clock this morning, with symptoms of suffocation. The report given by the friends was, that yesterday afternoon, being in school, and eating a plum, the child laughed, and was reprimanded by the mistress, who gave her at the same time a slight tap on the cheek; at that moment the child was sensible that the plum-stone had got into her throat. She was immediately seized with a difficulty of breathing, which has continued, with occasional severe attacks, ever since. A probang was passed into the œsophagus, and an emetic was given to her, before she came into the hospital.

It was evident that she required immediate relief. Mr. Bell said that he slipped, unobserved, to her bed-side, so as not to disturb or frighten her, for the purpose of examining her manner of breathing. She lay with her head raised high; she was restless, shifting her position, and tossing her arms; her chest rose high, and her nostrils were dilated; the sound of her breathing was hissing, husky, and impeded—it was in sudden gasps.

Having collected what tubes, probes, and forceps were likely to be of use, the child was laid on pillows, placed on the table so that her position was inclined, not horizontal. This was done for two reasons—because a person breathes with difficulty in the horizontal posture; and, because it permits the blood in the wound to flow outwards.

An incision was made through the integuments an inch and a half in length, the centre being opposite to the cricoid cartilage. The thyroid and guttural veins were seen turgid: it was not possible to avoid them, and they bled freely. Continuing the dissection on the fore part of the trachea, a small artery, the thyroidea anastomotica, was divided, and the wound bled considerably, so that the incision into the larynx was delayed a few minutes. The point of the scalpel was then thrust into the membranous space between the cricoid and thyroid cartilages. The child did not appear at all relieved, or only in a very slight degree, by this opening.

“My disappointment was now considerable. When I had done this operation before, the relief was immediate: no sooner had the point of the knife penetrated the membrane than the harsh sawing sound of the voice ceased, and the air came *siffling* through the wound; and when the end of the scalpel was used to hold apart the sides of the slit, and a quantity of mucus was discharged, the breathing was composed and easy.”

The probe was passed upwards through the glottis into the pharynx, but nothing foreign was found interrupting the passage. The probe was then passed from the wound in the larynx down into the trachea, with every precaution, lest the foreign body might be thrust downwards by it; but nothing was to be discovered there. At this time the breathing was worse; the child's colour was darker, and a degree of insensibility

prevailed. A portion of a large gum catheter was passed down into the trachea, and retained there, and the child's face and neck were bathed with cold water. The breathing became sensibly easier, and the freshness of colour returned to the cheeks and lips. The tube being withdrawn, further attempts were made to discover the stone, but without avail. Mr. Bell at this time thought of putting the child to bed, but, resolved to leave nothing undone, he explored the passage once more. He felt the pharynx with his finger introduced into the mouth. He then passed the catheter by the wound through the chink of the glottis, and examined the sacculi laryngis; he then sounded deep into the trachea; and now he thought he could feel a roughness more than belonged to the cartilages. He, therefore, enlarged the incision downwards, and having bent the end of a probe so as to make a little hook, he passed it down into the trachea: by means of this, he succeeded in catching the edge of the stone, and brought it to be visible in the wound; then, with the small dressing forceps, he extracted it. It was half of the stone of a plum, and it had lain with its rough convex surface towards the concavity of the tube.

Immediately after the stone was withdrawn, the child opened its eyes and looked about, apparently with the conviction that the thing was accomplished. Nothing could be more striking, during the whole of the operation, than that a child so young should have so perfect a notion of the necessity of something being done for its relief, and that it should remain so submissive.

The wound was dressed superficially, and the child was put to bed, breathing freely—to the great delight of those present, for it had been abundantly apparent that it was an affair of life or death.

Evening.—The child is perfectly quiet, and has slept a great deal.

Sept. 2d.—She is remarkably well; she speaks low, and complains of hunger. She breathes at present with perfect ease, and has done so ever since the operation. Leeches have been applied to the neck, and she has had some laxative medicine.

Sept. 12th.—The child is running about, and is quite well; but the wound is still open, and the granulations pro-

jecting. The zinc lotion is ordered, with compression by adhesive strapping.

Sept. 22d.—The wound is healed. Mr. Bell said, that the father, with the child in his hand, came running after him as he left the hospital to return thanks. When he said to the father, "I am distressed that the child has not recovered its voice:" he replied, "It was only her shyness; she speaks as well as ever she did in her life."

It is first to be remarked, gentlemen, that in this, as in former operations, it was the surprise of every one how deep the trachea and larynx lay in the wound. It is this which makes the operation difficult; the more so, that from dissecting the dead body, you are not led to expect it.

It is said in this case that I passed the probe upwards. The reason of doing this is, that foreign bodies are apt to be caught in the chink of the glottis, and it is necessary to push them up into the pharynx. But, indeed, I ought to have considered that in such a case the symptoms are more severe than those exhibited in the present. I passed the probe downwards in the absolute certainty of finding the foreign body there. I shall here shew you how the surgeon may make a fatal error. A child was brought into the hospital some years ago in a state of suffocation, as it was said, from having drawn a pebble into its windpipe. The house-surgeon, seeing there was no time for delay, made an incision between the thyroid and cricoid cartilages, and he then passed a probe from this part up into the throat. Thinking he could do no more, he desisted. The child died: and on examining the part, it was found, on slitting up the trachea, that the stone was impacted not a quarter of an inch below the incision. If he had turned his probe down, he would have touched the stone, and the child would have lived.

A case lately occurred in Dublin to a surgeon whose reputation has extended so as to make him well known to us here, which was attended with some curious circumstances. A boy had rubbed down a plum-stone in its centre, so as to open its cavity, and make a whistle of it. While practising upon this whistle, it suddenly slipped into his wind-pipe. He could breathe, notwithstanding, without much difficulty, although he had occasional paroxysms

of suffocation. Several days had elapsed before he presented himself at the hospital. To satisfy those around him that the stone was still in his windpipe, the boy began to whistle, of his own accord, upon his instrument. Without puckering his lips at all, he could produce a very clear whistle by merely throwing out the breath from his chest. With this evidence, the surgeon made an incision into the trachea; and when he had pushed a catheter through the chink of the glottis into the mouth, the boy called out that he felt the stone, and had swallowed it. Three days afterwards, however, he was again heard whistling as before. The breathing had continued impeded; and it was found also, by the use of the stethoscope and percussion on the chest, that the lungs on one side did not expand in breathing. It was inferred that the foreign body was probably still lodged in the trachea, and that it might be covering one of the divisions of the bronchial tubes. The incision in the trachea was therefore enlarged a little downwards, and the stone was expelled shortly afterwards during a fit of coughing.

In illustration of this fact, that a foreign body may be expelled by coughing, you will find some very interesting experiments performed upon dogs by M. Favier, as quoted by Sabbatier. He popped a foreign body into the glottis at the moment of inspiration. The animal was immediately convulsed, and it was thought he must have died, but he became so quiet that they deferred the further part of their operation for six hours. They then opened the trachea by dividing three of the cartilages, when the body was immediately forced out. The experiment was ten times repeated with a nail, a ball of lead, &c.; and although these were pushed deep with instruments, the body was cast out the moment that the incision was made. These experiments were performed to oppose the opinion which declared the operation of bronchotomy to be precarious from the difficulty of discovering the body.

The most important part of a clinical lecture, gentlemen, is the confessions of the surgeon. I ought in this case to have determined in my own mind where the foreign body lay, for you will observe that the symptoms are different according as the body lies in the grasp of the glottis or in the trachea. I might have known that if it had been in

the sacculus laryngis, for example, the symptoms would have been more violent, and the danger more pressing.

In the case operated upon by the house-surgeon, the mother came running in with the child in her arms, just after the pebble was swallowed, and in twenty minutes the child was dead. In the present instance the stone lodged lower down, and the child you have seen survived during the night. But do not delay performing the operation after you have ascertained that a foreign body is in the windpipe, because the child may be suffocated in the instant by the body rising from the depth of the windpipe, and being caught in the glottis. Thus a child, after drawing a cherry-stone into its windpipe, was nearly choked, but suddenly got relief; and some time after, while playing on the carpet, it was seized with another fit of suffocation, and died. The cherry-stone was found in the sacculus laryngis; and there can be no doubt that in the period between the two attacks, the cherry-stone had lodged deep in the windpipe, but that during the gambols of the child it had fallen forwards into the larynx.

In Pelletan's Clinique Chirurgicale you will see a case where the surgeon performed bronchotomy on a child, and extracted a bean. The weakness of the child after the operation was such that they believed him dead; but he recovered, called on his parents, and cried to have his playthings, and yet this boy died in fourteen hours. Another boy had the operation performed, and died in consequence. The expression is strong—"le coup mortel était porté:" although he lived for two months. Now the fatal termination in these cases was attributed to a gorging of the brain; and there is no doubt that a long-continued struggle for breath affects the circulation in the head in a very remarkable manner. But it affects the lungs more directly and more violently. When a person dies from suffocation, owing to some disease of the throat, the lungs do not freely collapse on examining the body. Here, then, there is a proof that they have suffered, and to this danger I call your attention particularly. But let us in future be alive also to the observation of Pelletan, of what takes place in the brain.

For some time after this operation I was very anxious for the child's life,

and I shall state the reason of this anxiety. A woman was brought into the hospital, who, in her frenzy, had plunged a penknife into her throat. It pierced the upper part of the thyroid cartilage, and entered at the union of the *cordæ vocales*. She was suffocated at the end of some months by the granulations which filled up the passage of the glottis. Another young woman, attempting to destroy herself, drew a penknife down the fore part of her throat—not in the vulgar way of cutting it across. She thrust the knife into the trachea, and divided five rings of the tube. She survived the first effects, but was suffocated by the retraction of the cut edges of the cartilages, and the swelling of the inner membrane, which thereby diminished the capacity of the tube. You see, therefore, the source of my anxiety. When we saw the granulations spring out from this wound, it was natural to apprehend that such granulations might also sprout inwards. With regard to the possibility of the divided cartilages retracting, the manner in which I operated might possibly prevent this; for you will observe that my first incision was made through the membranous space between the thyroid and cricoid cartilages; and when I enlarged it, I cut through the cricoid cartilage. Now you mark the peculiarity of this cartilage—that it is a complete circle, and that, when divided, its edges will resume their place, being supported by the continuity of the hoop on the back part. The cartilages below, that is the cartilages of the trachea, are not complete hoops, or rings; and therefore, when divided into two lateral portions, they may be displaced and retracted more easily. However, I must not omit saying that the windpipe has been divided with this perpendicular incision, without being followed with the consequences which I have apprehended, and which I have myself witnessed. I have recommended to my young friends to make experiments to illustrate this subject.

The last observation I shall make is less practical; but still it is very curious in a physiological point of view. When the probe was passed upwards, the child coughed, and expressed uneasiness, which shewed that the chink and the parts above the chink of the glottis were much more sensible than where we were operating.

It was also remarked that, although

no sensibility was evinced on putting the probe downwards into the trachea, yet, when it was passed so far within the tube as to touch the bifurcation, coughing and indications of superior sensibility were produced—as in touching the larynx.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

An Essay on the Use of the Nitrate of Silver, in the Cure of Inflammation, Wounds, and Ulcers. By JOHN HIGGINBOTTOM, Nottingham, Member of the Royal College of Surgeons of London. Second edition, much improved and enlarged. 1829.

WHEN a practitioner takes a particular remedy under his especial protection, the result is generally favourable to medical science, because the frequency of its employment in his hands soon leads to a discovery of what it will, and what it will not perform. It is true that we must generally receive the testimony of the patron with some degree of limitation, because those who look with a partial eye will often see more than reaches the duller optics of the indifferent spectator; but even with this drawback, it seldom happens that a series of experiments with any particular remedy, by an intelligent and candid man, do not lead to a juster estimate of its real powers.

The nitrate of silver has been for some time a deserving *protégé* of Mr. Higginbottom, of Nottingham; and the various applications which he appears to us satisfactorily to have shewn may be made of this substance, constitute no unimportant addition to practical surgery. The principal use heretofore made of the nitrate of silver, as a local application, has been for the purposes of an escharotic, as indeed the familiar name *lunar caustic* sufficiently implies; but according to our author, this action is very subordinate to the power of the remedy in subduing inflammation, whether of the phlegmonous or erysipelatous character—preventing suppuration in the former case, and arresting the extension of the disease in the latter.

Sometimes this object is attained by merely blackening the cuticle with the caustic, in which case a chemical union takes place between it and the animal texture. In other instances it is requisite to produce vesication, which is said to have "a singular and peculiar effect in subduing the process of inflammation;" while with regard to suppuration, it would appear to be sometimes prevented, and at others modified, so that the pus is reabsorbed or rendered thinner, and escapes by a smaller orifice than in similar cases where the silver has not been used.

Such is a very general statement of the positions advanced by Mr. Higginbottom, which he considers to be new, and we believe with justice—at least we never met with them thus expressly laid down in any author previously to the appearance of the first edition of the work before us.

The mode of applying the nitrate of silver for the various purposes above mentioned, consists in washing the part with soap and water, so as to remove any oleagenous matters from the surface, which is then to be wiped dry. The inflamed part and the skin immediately round it is afterwards to be moistened, and a long stick of the nitrate of silver passed along the surface, so as to touch every part, not only of the inflamed skin, but of the surface all round it, to the extent of an inch or more. In slight cases, it is sufficient to pass it once over the surface; but in severer injuries this must be done twice, three times, or oftener, if it be desired to produce rapid vesication, or if the cuticle be thick, as on the palm of the hand or sole of the foot. The part is to be exposed to the air till it dries, and is to be kept cool.

If the application has been properly made, the inflammation will generally be found to have subsided in 24 hours; but if there be any spot which has escaped being touched, the patient will complain of it, and such part must now have the caustic passed over it. There is generally more or less of vesication at this time. Within three days there is more vesication, but less swelling, while the pain is generally almost gone. The parts feel "puffy," and are free from inflammation. The vesications ought to be left to form crusts undisturbed, and these should be suffered to remain till they drop off of themselves.

So far the effects attributed to the

nitrate of silver may be characterized as negative—consisting in arresting inflammation; but Mr. Higginbottom has also found that results of a more positive kind may be obtained from it. He thinks that, under particular circumstances, it "modifies the action of the parts, so as to induce that form of inflammation which Mr. Hunter has termed the adhesive." Thus in simple incised wounds union by the first intention is frequently effected, by passing the nitrate over the surrounding cuticle; or if the wound be punctured, suppuration is prevented. In bruises where, from the severity of injury inflicted on the parts, sloughing would otherwise inevitably follow, the nitrate of silver, timely applied, preserves the continuity of texture, and averts the death of the part. The adhesive inflammation is not less certainly induced by this remedy in certain forms of ulceration; but this application of the lunar caustic is familiar: we mean the general principle of applying it to certain kinds of ulcers—not that it has been used precisely as directed by Mr. Higginbottom.

Another mode of employing the nitrate of silver is by producing eschar. An eschar may be adherent or unadherent; if it can be persuaded to adhere, the wound beneath "infallibly" heals. To form the necessary covering to a wound or ulcer, the remedy must be applied not only to the open surface, but also to the surrounding skin; for the eschar, in drying, contracts, and would thus, otherwise, leave part of the wound uncovered. Care must be taken then to leave the eschar undisturbed; but as it separates at the edges, from the part below healing, these ought to be pared off with a pair of fine scissors. A good method of securing the preservation of the eschar is to moisten the surrounding skin, and apply gold-beaters' skin over it. This method is said to render all dressings and ointments unnecessary, saving much suffering to the patient, and labour to the practitioner. But sometimes the eschar is unadherent, and this depends upon the formation of matter, or of a scab beneath: if from the former, it may be discovered in 24 hours, by making a little puncture, in the centre of the eschar, with any sharp instrument, and pressing out the pus; the nitrate of silver is then to be applied to the orifice thus made, or the same may be done at the edge where the

fluid oozes out. If from any accident the eschar be entirely separated before the healing is complete, the nitrate of silver must be applied *de novo*. If the eschar does not separate favourably, the formation of a scab beneath may be suspected. If there be pain and inflammation, with no appearance of healing, a cold poultice must be applied for some days, by which the eschar is removed, and afterwards the silver is to be applied as before.

The degree of pain which immediately results from applying nitrate of silver, of course varies. In small wounds it is trifling, but in recent wounds of all kinds it is proportionably more severe than in ulcers. The pain, however, is transitory, and the actual amount of suffering less than by any other mode of treatment.

When there is no chance of forming an eschar, owing to the size or situation of the wound, the cure may often be effected by applying nitrate of silver, and then a poultice, and repeating these from day to day; till at length the time arrives when the case admits of the formation of an adherent eschar, and thus healing up the part. This method is particularly recommended in neglected punctured wounds, and in cases of recently-opened abscesses.

The author, after the general statement, of which we have above given an analysis, proceeds to illustrate his mode of treatment in different forms of inflammation, wound, and ulcer. We shall make such selections from these as may be necessary to put our readers fully in possession of the subject.

Phlegmonous Inflammation.—"CASE 1. Miss —, aged 21, of gross habit, was seized on Saturday with acute pain across the patella, whilst sitting at dinner, without any previous known cause. On walking a short distance she found that she was lame, and that her knee was stiff. Half an hour afterwards the knee was observed to be swelled, but there was no redness. A poultice was applied. In a few hours more, inflammation was observed to be spreading up the thigh; the poultice was taken off, and soap liniment was applied.

"On the following morning the poultice was applied, and it was continued all day, and until Monday, when I saw her. The inflammation had spread along a third part of the length of the thigh, and downwards, nearly to the ankle;

the limb was much swollen, exceedingly hot, and a slight fluctuation was felt just below the patella. I applied the nitrate of silver over the whole surface of the inflamed parts, and did not open the abscess, as I knew from experience that the tumor would subside rather than increase soon after the application of this remedy. I directed an emetic and purgative medicine, and desired a fracture-cradle to be put over the limb, which was kept exposed.

"On Tuesday the inflammation was quite arrested, and there was no heat. I opened the abscess below the knee with a lancet, and some fluid was evacuated, which had more a serous than a purulent appearance. I applied the nitrate of silver within the cavity of the abscess.

"On the following day there was an increase of inflammation below the escharred part, on the foot, attended with swelling. I applied the nitrate of silver on that part, and directed an opening medicine. On the next day all inflammation was gone, but the limb was still much swollen.

"On the succeeding Monday the swelling of the limb had much subsided, and there was very little complaint. I directed a repetition of the opening medicine. On Wednesday the patient was convalescent. The leg required a bandage till the swelling was gone."

Whitlow.—It seldom happens in this affection that the patient applies till suppuration has already taken place. The plan recommended by our author is then to open the abscess freely, apply the nitrate well within the cavity, and envelope the whole in a cold poultice.

Erysipelas.—When this attacks the face slightly, the nitrate of silver is not recommended till the usual constitutional measures have been tried without success; but in several severe cases the progress of the inflammation has appeared to be arrested, and the same opinion is expressed by Dr. Storer, in a letter to the author, which he has inserted in corroboration of his own views. We confess, however, that the evidence of the nitrate of silver, applied to erysipelas of the face and head, appears to us the least satisfactory part of the volume. The mode of using it consists in its application upon, and for some way beyond, the inflamed surface; of course the usual constitutional means are not to be neglected.

Inflammation of the Absorbents.—
 “Mrs. H. aged 34, had a swelling similar to a boil on the fore arm, near the wrist, the centre of which had a vesicular appearance; and on removing the loose skin, presented an ulcerated surface, with highly inflamed and irregular edges. The absorbents were inflamed on the inside of the fore arm, nearly to the axilla. Mrs. H. could assign no cause for this affection, which had been coming on for four or five days. She complained of feeling indisposed and feverish.

“The nitrate of silver was applied to the ulcer, slightly over the surrounding inflammation, along the course of the inflamed absorbents, and on the surrounding skin, wherever there was any swelling. A blue pill, and infusion of senna and salts, were administered.

“On the following day the inflammation was observed to be completely checked. The patient stated that in about half an hour after the application of the nitrate of silver, she experienced sensible amendment, and that the arm became much cooler and easier; and that it had remained so during the night.

“On the second morning there were increased heat of the parts to which the nitrate of silver had been applied, and slight vesications on the parts which had been before most inflamed, viz. along the course of the absorbents, and around the ulcerated surface.

“On the third day there was vesication nearly all over the parts which were previously inflamed; but on the fourth day it had disappeared, and the cuticle was peeling off, leaving the parts free from inflammation. The eschar was adherent over the ulcer.

“On the fifth day there was a slight discharge from underneath the eschar, which continued for several days; afterwards the eschar remained perfectly adherent, and from this time no further attention was required.”

Punctured wounds are often of the most formidable description, and in no case is the beneficial influence of the nitrate of silver more conspicuous. If, in such an injury, there be any loose portion of skin at the orifice, it is to be cut away in the first place; the puncture and surrounding skin are then to be moistened with water, and the lunar caustic applied within the puncture

(but not very deep) and to the surrounding skin to the extent of an inch, or more, if the swelling extend farther. The eschar will frequently remain persistent, and the case require no farther care. If, however, some time has elapsed since the receipt of the injury, and the orifice be nearly closed by the swelling, a little pressure is to be employed, so as to squeeze out any fluid that may be in the wound, after which the nitrate of silver is to be applied, as in the former case. If abscess be found, it must first be freely opened, and treated as in whitlow. This mode of treatment, by means of nitrate of silver, is said to be particularly useful in wounds from needles, nails, hooks, saws, &c. in the stings of insects, and in inflamed leech bites. The author adds, that, during the last seven years, he has had frequent opportunities of treating wounds received in dissection by these means, and that he has “the most perfect confidence in their success.” The following is a case of formidable wound of the throat healed in this way.

“———, aged 50, in returning home in the dark, in a state of intoxication, fell on one of the spikes of the iron palisades at his door. It pierced between the os hyoides and the chin, to the depth of nearly an inch. The wound bled a little, and was very painful when I saw him some hours after the accident. The aperture was rather large and gaping, and, as there was no possible chance of healing it by eschar, I applied the nitrate of silver on the surrounding skin, to the extent of several inches, and to the edges of the wound. I then brought the edges of the orifices together by means of straps and adhesive plaister, and afterwards applied a compress and bandage. I prescribed a purgative.

In six days, during which interval there had succeeded no inflammation or swelling, and scarcely any pain, I removed these dressings. The wound was much closed, and a serous discharge flowed from it. I applied the nitrate of silver again on the exposed surface of the wound, then a little lint with the neutral ointment, then sticking plaister, and lastly a compress.

“In three days more the wound was nearly healed; there was rather more fulness round the puncture, but no in-

inflammation. The nitrate of silver, lint, and ointment, were again applied. At the next visit of this patient, three days afterwards, the wound was well.

"In this case the application of the nitrate of silver prevented the inflammation of the surrounding integuments, and the wound healed without the unpleasant effects frequently consequent upon large punctured wounds."

Bruised Wounds.—When he has been applied to sufficiently early, our author has always succeeded in preventing the process of sloughing. The following illustrates the mode of applying the silver in these injuries.

"Mr. Granger, aged 36, received a severe bruise, by a quantity of stones which had been piled up falling upon the outside of the leg. He was extricated from this situation with much difficulty. Besides the bruise, the skin was removed from the outside of the leg to the extent of ten or twelve inches in length, and in some parts to that of an inch and a half in breadth; and in the fore part of the ankle a deep furrow was made by the rough edge of one of the stones. I applied the nitrate of silver about half an hour after the accident, over the whole surface of the wounds, and protected the eschar by the gold-beaters' skin. The patient was directed to keep the leg cool and exposed to the air. He took no medicine. On the succeeding day the leg was a little swelled, but the patient did not complain of any acute pain, but only of a sense of stiffness. An adherent and perfect eschar was found to be formed over the whole extent of the wound. There was no fever.

"On the third day the swelling had abated. No further remedy was applied. The patient was still enjoined rest. On the fourth day the swelling was nearly gone. The eschar remained adherent. The patient walked about. From this time the patient pursued his avocation of a stone-mason: no further remedy was required, no inconvenience experienced, and the eschar separated in about a month.

"I think it totally impossible to have cured this wound by any other remedy in less than a month, during which period the patient must have suffered much from pain and fever, and have been quite confined to the bed or sofa. It is also quite certain, I think, that

there would have been an extensive slough, from the severity of the bruise. This was doubtless prevented by the application of the nitrate of silver."

Ulcers, except when small, cannot be successfully treated by an attempt to form an eschar. In large ulcers, attended with inflammation, Mr. Higginbottom directs the patient to take some opening medicine, and apply a common bread and water poultice for twenty-four hours. The inflamed parts are then to be washed with soap and water, and dried. Having moistened them with plain water, a long stick of the caustic is to be applied all over the inflamed and ulcerated parts twice, and rather more freely on the ulcer itself. Lint is then to be put on this, and the whole inflamed parts covered with linen, spread with neutral ointment. A compress of five or six folds, and a common roller, complete the dressing. At the end of four days the ulcer is to be examined, when the inflammation will be found nearly or entirely gone. The silver is then to be applied to the ulcer as before, and this method repeated every three or four days, till the cure be completed. The patient may walk about after the first or second application of the remedy.

Burns and Scalds.—By passing the lunar caustic once slightly over a burnt surface, the pain is increased for a short time, but afterwards entirely subsides, and the blackened cuticle peels off in a few days, leaving the part well. When the cuticle has been removed, the application as above produces an adherent eschar, and thus prevents ulceration. When a slough already covers the surface, our author has removed this with the scissors and forceps, and afterwards applied the nitrate of silver. He has not, however, he informs us, had an opportunity of using it in very extensive recent burns. After having applied it once, as above directed, he covers the parts most severely burnt with lint, and the whole with neutral ointment spread on lint.

Several cases are given; of these we select the following, in which a hard and painful cicatrix followed a burn.

"Timothy Coleman, aged 32, whilst in a state of intoxication, burnt his shoulder and arm very extensively. He was under the care of a surgeon, and the sore was healed in ten weeks. There

still, however, remained an inflamed surface, larger than the size of the hand, over the deltoid muscle. It had the appearance of fungus cicatrized over; it was attended with so much heat and pain as to prevent him from sleeping at night, or following his employment in the day for thirteen weeks, even after it was said to be cured. He had used a number of remedies. His health continued good.

"I first saw him on June the 20th, 1827. I applied the nitrate of silver as in external inflammation, over the whole diseased surface. I directed the part to be exposed to the air for three days, and then to be covered with the neutral ointment.

"As my patient resided at a distance in the country, I did not see him again for a fortnight, when he informed me that eight hours after the application of the nitrate of silver, he had more ease than he had experienced since the accident, that he was nearly free from pain, and slept well.

"I again applied the nitrate of silver very freely on the whole affected surface, as there still remained several inflamed spots, besides several slight ulcerations caused by the nitrate of silver. I then covered the part with the neutral ointment.

"In another week I saw my patient again. He said he had suffered more from the last application than from the former one; that it had acted more like a blister; that there had been a free discharge; and that the eschar had separated sooner. There appeared, however, scarcely any irritation, except from a few superficial ulcerations, on which I passed the nitrate of silver very lightly: I continued the neutral ointment. A few weeks afterwards this man called on me to say that he was quite well.

"This peculiar case is almost incurable by any other means."

In an appendix are contained several cases illustrating the use of the nitrate of silver as a blister, in various morbid affections, particularly of the knee, and in inflammation of the urethra; as well as its application to numerous other injuries, as gun-shot wounds, &c. &c.; but we have already made our readers acquainted with the general views entertained by Mr. Higginbottom, and his own ingenuity will suggest their application to individual cases.

The work contains several letters from respectable practitioners who have adopted this method of treatment with success, and we think the body of evidence before us clearly proves its utility.*

CASE OF MRS. DENMARK.

To the Editor of the London Medical Gazette.

October 12th.

SIR,

THE following letter was addressed to the Editor of the *Lancet* a fortnight ago, and considering his abhorrence of all "hole and corner proceedings," I can imagine no reason for his having declined to publish it. It would be unjust to Mr. Wardrop to suppose that the friendship of the *Lancet* is particularly inflicted upon him, and yet it is very certain that if Mr. Brodie, Mr. Earle, Mr. Guthrie, or Mr. B. Cooper, had, in a similar manner, examined a disease, the appearances of which were to overthrow or to confirm their peculiar doctrines, the Editor of the *Lancet* would most bitterly, and, I confess, I think very properly, have reproached them for thus deviating from the established custom of the profession.

I am, Sir,

Your obedient servant,
A FRIEND TO SCIENCE.

To the Editor of the Lancet.

SIR,

ONE of the leading principles by which you profess to be influenced, is to discountenance and openly reprehend concealment of every kind, upon subjects which the profession have a right to expect will be thrown open to them in the most candid manner. I, therefore, address you upon the subject of the late Mrs. Denmark's case, which has excited so high a degree of interest in this and foreign countries. The evidence that has yet been adduced by Mr. Wardrop, for the purpose of justifying the operation of applying the ligature on the distal side of an aneurismal tumor, has been deemed by the most competent judges to be inconclusive and unsatisfactory. It has for some time been known, that Mrs. Denmark's disease was rapidly proceeding to a fatal termination, and, of course,

* Some trials of this remedy have been made at St. Bartholomew's Hospital, see page 94.

a great and very laudable desire was felt by every scientific surgeon to be accurately informed of the appearances detected on dissection, as they would, to a certain extent, corroborate or weaken the hypothetical doctrines maintained by Mr. Wardrop. Under these circumstances, sir, it was but natural to imagine that that gentleman would be most anxious to make the dissection as public as possible;—that he would most studiously avoid the appearance or possibility of partially judging the merits of his own case. But Mr. Wardrop, who, upon most occasions, is a sufficiently sharp-sighted man, was injudicious enough to conduct this very important examination in a secret manner, for no persons were present but himself and an assistant. Mr. Wardrop, of course, had previously made up his mind as to the appearances he hoped to find, and we all know how easy it is to fancy that which we earnestly wish to detect. I will not impute to Mr. Wardrop discreditable intentions, but I must declare him to be a most improper judge of this case. His enthusiasm leads him to view every circumstance connected with the subject to which it belongs partially, if not erroneously. As a proof of this, I have only to refer to the assertion he makes in your number for Sept. 19th, that “the soundness of his principles has not only been recognised by the distinguished surgeons of this country, but by those of the continent also.” Mr. Wardrop, sir, grossly deceives himself: His principles have not been recognised.

It is the liberal and proper custom of the profession for every practitioner to solicit the attendance of some friend and competent judge to witness dissections from which important information is expected, and, if ever there were a case which ought to have been examined as publicly as possible, it was that of Mrs. Denmark.

The preparation, we are told, is to be placed in the museum of the College of Surgeons. But the great object was to ascertain the appearance of the disease *in situ*, before it was disturbed by removal. However fairly and properly the morbid parts may be prepared, the evidence that must result from their inspection now will be very unsatisfactory, in comparison with that which ought to have been afforded. With a singular want of delicacy, he has con-

stituted himself the sole juror in his own cause, and he must not be surprised if the favourable verdict he has returned be regarded with an eye of suspicion.

I am, Sir,
Your obedient servant,
A FRIEND TO SCIENCE.

CASE OF SCHIRROUS DISEASE OF THE STOMACH.

To the Editor of the London Medical Gazette.

SIR,

I beg to present you with the following case of schirrous disease of the stomach, and shall be obliged by your insertion of it in an early number of your Gazette, if you deem it of sufficient importance to merit publication. I have not added any observations upon the case, as was originally my intention, its details being in themselves somewhat extended.

I am, Sir,

Yours, &c.

RICHARD MIDDLEMORE,
M.R.C.S. &c.

Birmingham, Sept. 19, 1829.

Edward Harrison, æt. 43, applied to me on the 20th of May, 1829, for relief under the following circumstances:—He had (he said) been subject for many years past to occasional pain at the stomach, particularly after having taken an unusually hearty meal, or after sitting, as his business sometimes required him to do, in the bent position for a long space of time; latterly, the pain had been more frequent in occurrence, the appetite had diminished, and he had occasional nausea and flatulence; but, notwithstanding this list of ailments, he looked as if he were in good health, and was certainly in the enjoyment of full muscular power: he also told me, that he had never been intoxicated in the course of his life, and had even been ridiculed for his rigid sobriety. I made a somewhat hasty examination of the case, and prescribed some aperient medicines for immediate use, requesting him to call upon me in a few days, when I had intended to have investigated his case more attentively; but, instead of doing so, he took other advice, and applied in succession to three or four practitioners, whose medicines,

however, were as little successful as my own.

At this period, about eight months from the time of his first consulting me, he placed himself under the care of a physician, who has politely made me acquainted with the following particulars relative to his condition at that time:—Countenance pale, haggard, and sallow; pulse frequent and irritable; thirst; huskiness of the skin; occasional severe lancinating pain at the pit of the stomach, particularly after taking solid food; pyrosis; much flatulence; acidity at the stomach; rejection of all aliments, generally about half an hour after they had been swallowed; constipation, the evacuations being slender, pale, and scanty. Pressure over the region of the stomach detected a hard, firm substance, but owing to the extreme degree of suffering it produced, the limits of the hardened mass could not be clearly made out. Alkalies, mild laxatives, occasional doses of opium, with a regulated diet, seemed to produce a very beneficial effect; and, for a few days, the whole of the symptoms were so much relieved, that a reasonable hope of ultimate recovery was entertained. This apparent improvement lasted but a short time; every previous symptom returned with augmented severity, and opium combined with oxyde of bismuth was obliged to be frequently administered, to render his anguish tolerable.

At this stage of the disease I was sent for, about twelve months after he first consulted me, and continued in attendance till the patient's death. The following may be considered a brief outline of his symptoms on the 28th of May, 1829:—Severe local pain in the epigastric region, where a hard tumor could be distinctly felt, which was exceedingly painful on pressure; pulse frequent and irritable; constant thirst, with heat and dryness of the skin; frequent vomiting, which invariably quickly succeeded the swallowing of all aliments, the medicine previously mentioned excepted; an inability to take more than a small tea-cupful of liquid at any one time, the fluid regurgitating if he attempted to swallow a larger quantity; constipation; emaciation, œdema, and abdominal dropsy. I advised the following plan of treatment:—A seton to be made at the pit of the stomach; injections of strong beef-tea

to be frequently administered; the narcotic remedy to be continued, but food taken by the mouth to be as much as possible abstained from. From this plan, however, I did not expect much relief; and having made this statement to his friends, they did not choose to permit him to undergo additional suffering, unless I could promise more advantage than could have been consistently expected. Such were his sufferings, that he was obliged to take solid opium almost hourly; indeed, opium and brandy might now be said to constitute his entire sustenance. From this time, every important symptom previously enumerated became aggravated, till the day prior to his decease (Aug. 20, 1829,) when the sickness and pain left him.

Inspectio Cadaveris.—Body much emaciated; cavity of the abdomen contained several quarts of serum, in which large masses of lymph were floating; general appearance of the peritoneum rough, and somewhat tuberculated; gall-bladder distended with thick bile, its neck being greatly contracted from schirrous disease; the lower part of the œsophagus was singularly plaited and ridgy, or, in other words, raised into large, round, horizontal elevations; the stomach was externally hard and smooth, and preserved its circular form. On dividing it perpendicularly, I was astonished at the extreme smallness of an opening, three-fourths of an inch in diameter, surrounded on all sides by a firm brawny structure, nearly an inch and a half in thickness. On minute examination of the cut surfaces, it was found that the inner membrane was softer than usual, and slightly thickened; the peritoneal covering but little altered in appearance, the enormous deposit, constituting the chief part of the disease, being situated between them: its firm, brawny texture, intermixed with membranous bands, convinced me that it must be considered a fair specimen of schirrous disease. The cavity of the stomach was capable of containing only six ounces of fluid, its parietes being, as I have before mentioned, very much thicker than those of the left ventricle of the heart. The mucous membrane was very little diseased: in one or two points it had a puckered appearance, as though some time or other it had been in a state of ulceration. At the pylorus, several large nipple-like

prominences, covered by the lining membrane of the stomach, were discovered, producing a close resemblance to an enlarged and irregularly thickened os uteri. The niches left by the imperfect adaptation of the nipple-like enlargements at and near the pylorus, were scarcely large enough to permit the passage of thin fluids, when, the stomach and duodenum being removed, they were attempted to be urged through them. The arteries of the stomach were all enormously enlarged, although free from disease, and the neighbouring glands and cellular structure were increased in size and firmness. The intestines were in a very variable state of disease, being vascular, thickened, and even, in some part of their course, ulcerated. The other abdominal viscera were not conspicuously diseased. The head and chest were not examined.

CEREBRAL AFFECTION IN CHILDREN RESEMBLING HYDROCEPHALUS.

To the Editor of the London Medical Gazette.

SIR,

I HAVE been comparing Dr. Gooch's chapter on a complaint of children commonly attributed to congestion of the brain, in his late work "On the Diseases of Women," with Dr. Marshall Hall's pamphlet on "A Morbid Affection of Infancy, arising from Exhaustion, but resembling Hydrencephalus," which was analysed in your last number, or rather, copious extracts from which were given.

The conclusions to which Dr. Gooch's chapter on this interesting and important subject lead are, that a set of symptoms which, when they affect children, are always attributed to determination of blood to the head, sometimes arise without this state of circulation in the brain, from deficient nervous energy; and that in these cases the depletory treatment commonly employed is in the highest degree injurious, and that this condition requires nourishment and cordials. Now, although this truth was unknown to the practitioners of the profession, at least was not practically attended to, it had been already described by Dr. Abercrombie, in his

work on "Diseases of the Brain;" and last winter a paper had been read about it by Dr. Marshall Hall, at the Medico-Chirurgical Society: a short report of it was published in the Medical Gazette, before the publication of Dr. Gooch's work. Although he appears to have been alive to this form of disease long before he met with the above short notices of it, he very readily yields priority of announcement to Dr. Abercrombie and Dr. Hall. But Dr. Gooch's chapter leads to another conclusion equally interesting and important in a practical point of view to that already stated, and which had been noticed neither by Dr. Abercrombie nor Dr. Hall. He opened the heads of some children who had died of this complaint, and who had been kept for several days, by purging and bleeding, in a state of circulation "at the lowest ebb consistent with life," and then he found the blood vessels of the brain singularly empty, but an excess of serum in its ventricles; he concludes, therefore, that in the brain there may be effusion of serum from a state opposite to congestion, and that the depletory treatment which is used so actively to prevent it, may sometimes be the cause of it. This deserves to be looked closely into: if true, it is a curious and important circumstance. Yet neither Dr. Abercrombie nor Dr. Hall had noticed it—neither of them seem to have opened the children who died of these symptoms. It was not mentioned by Dr. Hall in his paper before the Medico-Chirurgical Society; and even in his more extended account of it, published since the appearance of Dr. Gooch's volume, he does not seem to be aware of it, as appears by the following extract:—"A state of exhaustion of the general system, as I have observed elsewhere, by no means precludes the possibility of *real congestion of the brain—it rather implies it. In extreme cases, there are not only the symptoms of cerebral congestion during life, but effusion of serum into the ventricles of the brain is found on examination after death.*" Is it not plain from this passage that if Dr. Hall were to find serous effusion on opening these cases, he would attribute it to cerebral congestion? Yet Dr. Gooch's cases render it highly probable that it may be caused by an empty state of the cerebral vessels. This conclusion, if true, is the most valuable part of Dr.

Gooch's chapter. His opinion appears to me to be highly probable, not only from the cases which he has related, which bear directly upon the question, but indirectly, from what takes place in other parts of the body.

So much has been said of late years of inflammatory dropsy, and depletory treatment is so constantly resorted to for it, that we seem to have forgotten the important facts that anasarca and copious effusion may take place into the cavity of the peritoneum in persons with broken-down health, and without any visceral disease; and may get well under the influence of country air, nourishing food, and tonic medicines. As this subject is at this time exciting considerable attention, I hope it will be directed toward this important pathological question, which at present seems likely to be totally overlooked.

I am, Sir,

Your constant reader,

* W. H.

September 26.

METHOD OF PREVENTING UTERINE HÆMORRHAGE OCCURRING AFTER DELIVERY.

*To the Editor of the London Medical
Gazette.*

SIR,

You will oblige your correspondent by allowing him, through the medium of your truly valuable Journal, to make known to the junior part of your readers the means he has lately found successful in preventing uterine hæmorrhage after delivery. The plan is simple, and is probably employed by those who have long practised midwifery; but your correspondent is not aware that it is generally taught, or that the superior advantages it appears to possess are duly appreciated by junior practitioners.

Perhaps no cases are so terrific to the young practitioner of midwifery as those of uterine hæmorrhage, because none are more fatal, or less under the control of medical skill. Of this truth the writer felt the almost overwhelming force, on being summoned to attend a patient who had had frightful floodings immediately after the delivery of each of her six children.

It suggested itself, that, as hæmorrhage from the partrurient uterus comes on generally immediately after the expulsion of the child, and this because the placenta is partly detached at this period, from the change of form which the uterus has undergone on parting with the fœtus, that if the uterus could be prevented from filling with blood until the birth of the placenta, all might go on well afterwards. This appeared probable, and the means employed to produce this state of things was thus effected.

The patient was found with the os uteri well dilated, and wanted only some expulsive pains to complete the birth. She was laid on her back, and an intelligent assistant was directed to place both hands on the distended uterus after each pain, to prevent the uterus rising again in the abdomen, by a gentle continued pressure. A few pains completed the delivery of the child: it was immediately transferred to the care of the nurse, and the accoucheur then took charge of the uterus himself. It appeared to want the contractile power; the hands were firmly applied till action came on; in two or three minutes the placenta was expelled, from being probably partially detached before. The uterus being now grasped, felt about the size of a cricket-ball. A small book was folded up in a long napkin, and this was fixed tightly around the body, in such a manner that the lower edge of the book prevented the upper edge of the uterus from rising above the pelvis. The patient was not left for some time, but no symptoms of hæmorrhage supervened. It remains for the reader to judge whether this mode of treatment prevented the patient from flooding, who had done so in every other accouchment, or whether it chanced that she was not under the circumstances on this single occasion to induce uterine hæmorrhage.

Another case, equally conclusive to the writer, has since occurred to him; but as the details of both are pretty much alike, the reader need not be troubled with them.

The novelty of this plan, if it be novel, is the making constant pressure on the uterus, so as to prevent its being distended with coagula previously to the expulsion of the placenta.

A YOUNG ACCOUCHEUR.

Birmingham, Sept. 20, 1829.

* We shall be much obliged.—E. G.

MEDICAL GAZETTE.

Saturday, Oct. 17, 1829.

—
 “Licet omnibus, licet etiam mihi, dignitatem *Ar-
 tis Medicæ* tueri; potestas modo veniendi in pub-
 icum sit, dicendi periculum non recuso.”—CICERO.
 —

DISTURBANCE AT GUY'S HOSPITAL.

We alluded in our last Number to an attempt which had been made to create a disturbance at Mr. Key's Introductory Lecture; and we now recur to the subject, as affording one among many proofs of the good sense and good feeling which pervade the great majority of pupils, as well as of the contempt in which they hold those ill-disposed persons who endeavour to cajole them into a belief that, to violate the common courtesies of life, is to shew spirit and independence; and that to depress others is to elevate themselves.

The school at Guy's has long been *honoured* with the particular notice of a contemporary journalist; and, in his early volumes, he bestowed upon the establishment all the commendations it deserved—commendations, however, which were even then rendered remarkable, by the contrast they presented to his mode of treating other institutions of equal merit. But having been recently turned out of St. Thomas's, and burning with indignation, he transferred his patronage to Guy's; and our readers may possibly remember the terms of unqualified approbation in which this establishment was spoken of. But, unluckily, the medical officers of Guy's Hospital happened to be *gentlemen*, and soon manifested symptoms of uneasiness at being thus singled out for commendation in a quarter so suspicious; till, at length, one of them having expressed his opinion of our contemporary in terms by no means flattering, the whole sys-

tem was instantly changed. The affront offered by the medical officers of St. Thomas's had been great, but it was private; in this instance the offence was public: so much blacker was the injury, and so much deeper must be the revenge. Mr. Travers, who had been persecuted with all the malignity of relentless hatred—Mr. Green, who had been insulted even to the extent of fictitiously representing him as in the list of his contributors—Mr. Tyrrell, whose prosecution and whose triumph had been the theme of the bitterest and most slanderous comment—all were forgotten, in the overwhelming and absorbing purpose of ruining the school at Guy's. The distinguished individual whose name had given lustre to British surgery, was now selected as the butt of his ribaldry, and week after week were the pages of his journal devoted to insulting the man, but for whose too easy acquiescence in suffering his lectures to be reported, the publication would never have risen into notice. Of the conspiracy by which it was attempted to carry his vengeance into effect, through another of the same name, it is unnecessary for us to speak; it has proved a signal instance of retributive justice, and, by exposing the machinery which kept the system of slander in operation, has contributed more than any other circumstance to its ruin. One would have expected that repeated failures, if they could not generate better principles, would at least have inspired caution. Experience, it is said, teaches fools; but where folly is blinded by passion, the lessons of the past are forgotten in the pursuit of revenge.

It appears that, last winter, one of the teachers at Guy's—Mr. Key—mentioned to his class that it was intended to give a prize to the most deserving surgical pupil. This announcement was made, not in the prospectus of the lectures—not in the introductory address—not at

a time or under circumstances which could have rendered it an inducement for pupils to enter—but after one of his lectures at an early period of the season. Such prize, however, was not given. We state it thus broadly, because we wish to give the circumstances precisely as they stand. We “nothing extenuate;” would we could say of *others*, that they “set down nought in malice.” The fact of Mr. Key having mentioned the design of establishing a surgical prize at Guy's, was a sufficient indication of his wishes upon the subject; and had he stood alone, would have been the guarantee of its fulfilment. But why, it will naturally be asked, did not Mr. Key offer some explanation to his class, when he found that circumstances had occurred to prevent him from carrying his intentions into effect? We do not speak “on authority,” but we apprehend that this omission arose from two causes—first, that no explanation was demanded; and Mr. Key, finding himself in a situation of some embarrassment, was not anxious to volunteer it; but, secondly, this backwardness to explain depended upon the impossibility of doing so without involving another person, whose conduct he did not wish to place in disadvantageous contrast with his own.—This is the state of the question, so far as we can gather from what fell from Mr. Key, when he addressed his class, on Tuesday evening. For our own parts, we are free to confess that, in our opinion, Mr. Key carried his delicacy in this respect too far, and that it would have been better, having once expressed his desire to institute a prize, to have explained the existence of unexpected difficulties at the time they occurred.

Instead, however, of giving to this gentleman the credit to which his anxious wish to promote the interests of the

pupils entitled him, every effort was made to represent him as guilty of having held forth, as an inducement for pupils to enter to his lectures, advantages which were not realized, and as having deliberately and wilfully practised an imposition. Well knowing that till the re-assembling of his class no proper opportunity of explanation could now present itself, and aware that Mr. Key was not to be driven from his purpose by intimidation, the opportunity of representing this delay as a refusal was too good to be lost, and no pains were spared to impress the pupils with the idea, that Mr. Key had first broken his promise, and now, by refusing to explain, was adding insult to injury. The notes of defamation were sounded on the usual instrument of slander—the secret whisperings of practised backbiters were passed from ear to ear—placards were pasted on the walls, and handbills circulated through the lecture-rooms, in which the pupils were “solicited” to insult their teacher. In short, all the machinery by which a few profligate individuals earn a disgraceful subsistence, was put in operation, and every effort made to get up a new “tragedy” at Guy's. We subjoin an accurate report of the proceedings.

It was fully understood that an attempt was to be made *publicly* to insult Mr. Key, on his entrance into the theatre, and the following *characteristic* note, *printed* and extensively circulated, left no doubt as to the source whence this disgraceful hostility had emanated:—

“The Pupils of Guy's Hospital are particularly solicited to join in expressing their indignation of Mr. Key's ungentlemanly conduct.”

At eight o'clock Mr. Key entered the lecture-room, and we never recollect to have seen Sir Astley Cooper more cordially received. The long-continued applauses bestowed on the lecturer were the best and most convincing proofs of the little effect pro-

duced by the machinations to which we have just alluded. On their conclusion, two or three hisses were heard; and to one individual, who had particularly distinguished himself by the coarse and disgusting vulgarity of his expressions, the attention of the class was directed by Mr. Bransby Cooper, who was sitting very near him, and who, addressing Mr. Key, requested him not to proceed until this individual either quitted the theatre or ceased to interrupt the lecture. This declaration was immediately succeeded by universal cries of "Turn him out!" "Turn him out!" which was, however, prevented by Mr. Key commencing his address, of which the following is a correct outline:—

"Gentlemen,—I feel most truly grateful to you for the reception you have given me this evening—a reception the more gratifying as it shews me that your feelings perfectly accord with my own as to the source and nature of the machinations which have set this paltry paper in circulation (continued applause). I am one of the last to complain of any attacks, however unmerited they may be, made upon my public character; I have been too long used to public life to notice any slanders, however atrocious; and I am prepared to receive a thousand times as many shafts without bestowing upon them more notice than I have hitherto paid to them. But, when an attack assumes this garb; (holding up the paper) when the standard of hostility is attempted to be raised between the lecturer and his pupils; when pupils 'are particularly solicited' to visit with their indignation the 'ungentlemanly conduct' of their teacher, it is high time that the lecturer should cease to be silent. What, gentlemen, is the nature of the accusation on account of which you are 'particularly solicited' to shew your indignation? From all I have been able to learn of this grave accusation, I believe that it relates solely to the non-distribution of the prize at the conclusion of last season; and upon this point I think it right to say a very few words. In the first place, the distribution of a prize was an act perfectly gratuitous on my part; secondly, the circumstance of a prize being given was not advertised in the hospital papers—it was not mentioned at the commencement of the course of lectures—it was not until the end of the fourth lecture,

when the pupils had fully entered, that any announcement of a prize was made. But still I am free to confess that a promise of a prize was distinctly made, and I am also willing to admit that this promise was not fulfilled. The circumstances which gave rise to this omission I am unwilling to advert to farther, as the explanation would necessarily involve another individual; and I am perfectly content to bear the whole brunt—the whole odium of this charge; at the same time you will do me the justice to believe that the omission was one not dependent on me, and that none could regret it more than myself (applause).

"Now, Gentlemen, I beg you distinctly to understand that not one word of this explanation would I have uttered had I entertained the least suspicion that this miserable production had emanated from one of you. But I do not believe that there is a pupil attending this school who could be guilty of an act so unkind, so ungenerous as regards myself, so deliberately base and cowardly as regards its author."

[Here the plaudits continued for several minutes, during which time the conduct of the individual above alluded to became so outrageous that Mr. Cooper seized him by the collar, and insisted upon his quitting the theatre. Several of the gentlemen immediately rose to assist in putting Mr. Cooper's threat into execution; and he would have been quickly expelled had not the lecturer intreated them to desist. Mr. Cooper then allowed him to resume his seat, on condition that he should remain quiet during the rest of the evening. After some time, order having been restored, Mr. Key proceeded:—]

"I know, Gentlemen, too well the impure source from which this paper has emanated, but my lips shall not be defiled by giving utterance to the name. I know, too, the agents who have been employed to circulate these papers, but their utter worthlessness, and their obscurity, shall be their protection. Gentlemen, this evening was intended to witness my degradation. I ask you, am I degraded in your esteem (loud and continued applause)?" Am I degraded in the estimation of my colleagues?—their presence testifies the contrary. Am I degraded in my own esteem?—No. If ever I had reason to be proud, the result of this evening makes me truly so. I am

proud that, of all the lecturers and teachers of this school, I alone am found to be vulnerable. I am proud that, after the most industrious attempts to find a blot in my character, this, like the heel of Achilles, should have been my only vulnerable point (continued applause).

"Gentlemen, we have pretty good evidence that one of the agents concerned in this miserable plot is at present amongst us: now, then, is the time for my revenge. To him will I address myself; and if there be another present who, from a fellow feeling, has leagued himself with this malignant plotter; if there be another here who has been weak or wicked enough to become the agent of this worker of evil, let him return home with his comrade, and report to his employer the success of his mission; let him describe to him the utter failure of all his plans; let him say that he found a large and respectable class, who, in spite of his 'particular solicitations' to the contrary, received their lecturer with demonstrations of affection and applause. Let him say that he saw that lecturer stand firm in the consciousness of his own innocence; let him say that he saw him surrounded by his colleagues*, men of high honor, who came to support him by their presence; let him tell his employer that the scene of degradation which the author of this paper had anticipated, was converted through the means of that very instrument into a scene of triumph; and, to fill his cup of bitterness to the brim, let him describe what the result of this conspiracy has been, where the accused is a man of integrity, and where the assembly of his judges possess feelings of honour and manly independence."

The feelings of one or two individuals, who were known to be concerned in this transaction, may be better imagined than described; they made several attempts to address the class, but the moment they rose, their voices were drowned by acclamations from all parts of the theatre.

We congratulate the profession, and especially the school of Guy's Hospital, on the total failure of this disgraceful

attempt to interrupt a public teacher in the discharge of his duties, and to convert the lecture-room into an arena of angry contention between him and his pupils. We trust that the time is not far distant when every member of the profession will follow the example of the students at Guy's, and shew their full conviction that no portion of their interests or honour can, with safety, be trusted to those with whom honour is a word unknown, and whose sole object is to sell the greatest possible number of their weekly calumnies.

Under the mask of confirming the independence, and advancing the best interests of the profession, the agents of this system have dishonestly but sedulously laboured to introduce universal suspicion and distrust. The medical world was amazed, and, for a time, almost paralysed, by the impetuosity and the apparent boldness of the attacks. Some thought, that as plagues and tempests are said not to be entirely without their use in the natural world, some such uncertain and negative good might possibly be associated with this moral tornado. It was soon evident, however, that this hope was vain, because the interests of those concerned in the publication were not in accordance with the interests of the profession.

The practical evils arising from the *Lancet*, like the devastations of the tempest, will require some time for their entire removal; but its party is now reduced to a few obscure individuals—its influence is gone; and we believe, ere long, it will be regarded as the reproach of the profession that it ever had existed. Perhaps it ought to be admitted, in favour of the unprincipled and unfortunate persons connected with it, that their conduct has, to a certain extent at least, been the result of necessity, from feeling conscious that they belong to a class of society who are indebted for their notoriety, and almost

*Right, Dr. Addison, Mr. Cooper, and others, were present.

for their existence, to the maintenance of suspicion, discord, and confusion.

The Editor of the *Lancet*, commenting on this disgraceful transaction with all the bitterness of a disappointed partizan, asks—"Who is Charles Key?" The question is easily answered: Mr. Key is a gentleman of unimpeached character, and an accomplished surgeon, engaged in the actual practice of his profession. But this question, so insolently put, naturally suggests another:—Who is he that asks? Who is Thomas Wakley? What is his character, private or public? "What light has he ever made in the darkness—we mean the darkness of professional error, to which he can now revert with triumph, and remember without shame that he kindled it?"

PUBLICATION OF MR. LAWRENCE'S LECTURES.

It is industriously insinuated in the *Lancet*, that some advantages are afforded by Mr. Lawrence to that journal in the publication of his Lectures; in other words, that Mr. L. corrects the press. This we positively deny, and dare the Editor of the *Lancet* to assert that it is so.

Much as we have differed with Mr. Lawrence on some points of professional politics, we have always treated him as a man of science and a gentleman, and, therefore, had no hesitation in asking his consent to publish his lectures. With us, his permission to do so—full, absolute, and unconditional—was a *sine qua non*, before we ventured to announce our intention, and such permission he communicated to us *both verbally and in writing*. After all the vapouring in the *Lancet* about *our* disrespect towards Mr. Lawrence, it will scarcely be credited, but is, nevertheless, literally true, that Wakley had the impudence to ad-

vertise the publication of that gentleman's lectures in his journal, before he thought proper even to acquaint him with his intentions,—clearly shewing that he meant to appropriate them to himself, at all hazards, as he had been accustomed to do the intellectual property of others; and yet he talks to us of disrespect! *Quis tulerit Gracchos de seditione querentes?*

CURIOUS PLAGIARISM.

In the September Number of the *Medico-Chirurgical Review*, the respectable and intelligent Editor accuses Dr. Gooch of having borrowed his opinions on insanity from Dr. Burrows; in proof of which he gives a sentence from these two authors, in which the same thought is expressed in almost the self-same words. In 1829, Dr. Gooch writes thus: "It appears, therefore, that emotions of mind are capable of disturbing the organs of the body; and though moral causes in themselves, they may be physical in their operation." (*Diseases of Women*, p. 187.)—But, in 1828, Dr. Burrows had written thus: "All emotions of the mind, it is evident, are capable of disturbing the corporeal functions; and though in themselves moral causes, they become physical in their operation." (*On Insanity*, p. 22.) Now the sentences are so strikingly alike, that we think it quite clear that the one was copied from the other, and as Dr. Gooch's volume was not published till a year after that of Dr. Burrows, it *seems* logically to follow that the former copied from the latter. Now it is quite true that Dr. Gooch stole this sentence—not, however, from Dr. Burrows, but from an author whose work was published nine years before Dr. Burrows's, and from whom Dr. Gooch has a right to steal as much as he likes—*himself*. If our contemporary will take the trouble to open the *Transactions of the College of Physicians* for 1819, and turn to Dr. Gooch's paper on Puerperal Insanity, he will find, in his summing up at the end, the very sentence which he accuses him of copying from Dr. Burrows. *It is, therefore, quite clear that Dr. Burrows copied the sentence from Dr. Gooch*. He certainly read Dr. Gooch's paper, for he not only

quotes it repeatedly, but he has copied two errors of quotation from it, which we leave the critic and the reader to find out. We can easily explain the plagiarism, however, without any uncharitable supposition. In reading Dr. Gooch's paper, Dr. Burrows, having perhaps a tenacious memory, retained not only the thought but the phrase; and when, years afterwards, he came to write on the same subject, found the sentence in his mind, and fancied that it had grown there. This habit of unconscious plagiarism is said to have been remarkable in Lord Byron; to be equally remarkable in another distinguished author, still alive; and we have observed it in other men, to an extraordinary extent, of whose literary honesty we have not the smallest suspicion. As to Dr. Gooch's borrowing his ideas from Dr. Burrows, the germs of them all may be found in his paper of 1819, and in their present mature state, on all the leading points of the subject, such as the condition of the mind, the state of the cerebral circulation, the influence of blood-letting, the treatment of the disease, and, in some cases, the propriety of seclusion. Their opinions, so far from being borrowed, are wide apart from one another.

Every body remembers Mr. Canning's story of the jealous dramatist, who accused a rival dramatist of stealing from him his thunder; and if these things are indulged in, we shall have one author accusing another of stealing his *ands* and his *ifs*, his colons and his periods.

PROCEEDINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY.

THE meetings of this Society commenced on Tuesday evening, on which occasion, in the absence of Dr. Roget, the chair was filled by Mr. Lawrence.

The first part was read of an interesting paper on uterine phlebitis, by Dr. R. Lee; but as the subject was not completed, we shall postpone our account of it till after the next meeting.

GUY'S PHYSICAL SOCIETY.

IN deference to the antiquity of this Society, we deem worthy of record a

revolution it has recently experienced, by which it is founded on an entirely new basis. A society established so far back as 1772, earlier by a year than any other in the metropolis—the parent, therefore, of the rest—cradled during the infancy of modern medicine, and, for above half a century, ministering to its rapid advance—such a society we cannot look on but with interest; especially when, after seeming decay, it is again rising into the freshness and vigour of a second youth.

The old society was declining, deserted by many of its members, and embarrassed by debt. The remaining members, therefore, thought it prudent to resign the library, their only property, into the hands of the treasurer (their creditor), on the condition that he should re-model the society, allowing them the enjoyment of their former privileges. This has been done; and with an improved library, and a more simple and liberal code of laws, the society is now re-opened. With a view of promoting a useful object, we notice the first meeting, though it is not our intention hereafter to report the proceedings.

The first meeting of the new Society was held on the 3d inst. Dr. Bright in the chair.

The PRESIDENT opened the business of the evening by reading a sketch of the future regulations of the Society, furnished by Dr. Hodgkin. These are not yet reduced to proper form, but in substance are as follows:—

1. Members of the old Society shall retain all their former privileges, as to use of the library, presence at meetings, &c.

2. The library shall be open to all pupils of Guy's Hospital, at hours hereafter to be appointed.

3. Meetings of the Society shall be held once a fortnight (Saturday, 8 P.M.) for the discussion of medical papers and cases of disease, to which all pupils of the Hospital, and visitors (by ticket) may be admitted.

4. Members of the Society, pupils, and the profession generally, are invited to furnish cases and papers for discussion.

5. None are *required* to furnish papers, &c. or are liable to fines or penalties in any form.

6. The direction of the Society being in the hands of the Hospital Council,

no private business, or act of legislation, can be introduced into its meetings.

7. The members, medical officers, teachers connected with the Hospital, and visitors, shall meet in the library for conversation, half an hour before each public meeting; when tea will be provided.

Having read this statement, the President made some forcible remarks on the advantages of societies in promoting medical discussion, especially by inducing junior members of the profession to write dissertations on particular subjects. Such dissertations, he thought, were always beneficial to the authors, and in very many cases proved important to the profession and the public; an instance of which he adduced in the case of the late Dr. Currie, whose views of fever, and its treatment by cold affusion, had their origin in a paper which he wrote for the Royal Medical Society of Edinburgh.

After some discussion on the mode of conducting the business of the Society, Mr. ILIFF stated that he would, at next meeting (October 17th), bring forward a case of small-pox after vaccination, with some remarkable circumstances.

HOSPITAL REPORTS.

EDINBURGH ROYAL INFIRMARY.

Removal of the Superior Maxillary Bone.

ELLEN GRANT, æt. 54, admitted under the care of Mr. Lizars, July 30th. Three weeks previous to admission, had laboured under general dropsy. States, that three weeks ago she felt pain in the situation of left superior maxillary bone; and that, for a month previously, on blowing her nose, a bloody fluid escaped from the nostril. Five days ago, Mr. Lizars extracted a mucous polypus from her nose, but the pain in the region of the superior maxillary bone continued lancinating and very severe during the night, preventing her from sleeping.

There is considerable swelling of the cheek, and the tumor is exceedingly painful on pressure. It projects into the posterior part of the left nostril, and towards the cheek bone; but the orbit is not at all affected. Pulse 100, and of moderate strength; appetite impaired; countenance pale; thirst; bowels constipated.

Ordered a purgative draught.

August 1st.—To-day Mr. Lizars removed the diseased parts. The patient was laid on

her right side, and the trunk of the temporal and internal maxillary arteries was secured immediately below the digastric muscle. A ligature was also placed on the external jugular vein, which had been divided by the first incision. An incision was now made with a bistoury, from the angle of the mouth to the masseter muscle. The left lateral cartilage of the nose was slit open close to the septum, and the knife carried downwards, through the upper lip, near the labial fossa. The flap thus formed was then dissected up towards the orbit and malar bone, so as to expose completely the diseased mass. The mucous membrane lining the floor of the left nostril, the gum, palate, and velum pendulum, to the left of the longitudinal palatine suture, were divided; and the separation of the bone was accomplished by the saw, Mr. Liston's forceps, and a pair of strong scissors; but the orbitary plate of the superior maxillary bone was carefully separated from the eyeball by the handle of the knife. The tumor was of a medullo sarcomatous structure, and adhered to the pterygoid processes of the sphenoid bone, a diseased portion of which necessarily remained attached. A portion of the malar bone contiguous to the tumor, and involved in the disease, was removed. Several mucous polypi adhered to the left inferior turbinated bone. The facial artery was secured, and some lint placed in the wound, in consequence of a slight oozing at its upper and posterior part. The edges of the wound were approximated with sutures and hare-lip pins, and one or two light compresses were applied and retained by a bandage.

Immediately after the operation, 50 drops of laudanum and 3j. of tincture of hyoscyamus were administered. No secondary hæmorrhage. Slept well.

August 2d.—Face somewhat swollen; has little or no pain, but complains of slight sore throat. Pulse 92; bowels open.

Habeat haustum purgantem et haust.
Anodyn.

August 4th.—The pins have been removed. All the wounds are healed except a small portion near the ear; this, however, is united internally. Ordered light nourishing food.

5th.—One dark scanty stool has been procured by an enema. The lint, which was inserted within the mouth, has been discharged. The mouth to be washed occasionally with warm water.

8th.—Mouth to be washed with a lotion containing myrrh and cinchona.

Habeat Vini Albi 3vi.

9th.—Habeat Vini Albi 3viii.

10th.—Mouth to be washed with a weak solution of the chlorate of lime.

16th.—The external wounds being healed

and the patient doing well, she requested to be dismissed*.

Dislocation of Femur upwards and forwards.

David Craig, æt. 38, admitted under the care of Mr. Lizars, Aug. 29.

About an hour previous to admission he had fallen about 60 feet from the mast head of a ship, and sustained dislocation upwards and forwards of the left femur, and fracture of several ribs of the same side, and of the right olecranon. The head of the femur was lodged over the pubic attachment of the pectineus muscle, its apex was distinctly felt in the groin, and the pulsation of the femoral artery could not be perceived. The whole limb was turgid, and of a blue colour. The thigh admitted of considerable flexion, and the limb was shortened, and so much everted, that the foot was placed at a right angle to its fellow. The dislocation was easily reduced by gradual extension and sudden rotation of the limb inwards. The right arm was extended and retained in that position by a splint placed on its fore part.

Evening.—His pulse being full and quick, and as he complained of pain in the left side, ʒxx. of blood were taken from the arm.

Rx Sulph. Magnesiae ʒiiss.

Vini Antimonii. ʒij.

Aquæ ʒviii. ʒij. every two hours.

30th.—Pain diminished; pulse 80; bowels open.

Sept. 15th.—No untoward symptoms supervened, and the patient recovered rapidly.

Disease of Kidney, producing symptoms of Stone in the Bladder.

John Douglas, a seaman, æt. 47, admitted under the care of Mr. Liston, August 15.

Three years ago he sustained an injury of his side, in consequence of a fall; and soon after the accident experienced some difficulty in making water. Twelve months afterwards he passed a good deal of blood in his urine. He has constant micturition, especially during the night; and complains of severe pain after the bladder is emptied. His urine often stops suddenly while flowing in a full stream, and while making water he feels pain at the extremity of the penis. The urine is coagulable by heat. On sounding him no stone can be discovered.

Rx Opii gr. iij. Fiat suppositorium.

Habeat Emulsionis Camphoratae ʒss. quater in dies.

17th.—Has become incoherent, is very weak, and evidently sinking.

23d.—Died at one p.m.

* Three days afterwards she suddenly expired, and no dissection could be obtained.

On dissection, no calculus was found; bladder sound; surface of right kidney nodulated; scarcely any of its natural structure remained, it being occupied by numerous abscesses of various sizes, which contained thick purulent matter of a cream colour. The abscesses appeared to have been of considerable duration, their parietes being dense, and lined with firm lymph deposited irregularly, and in some places in considerable quantity. They communicated with the pelvis of the kidney, which was much contracted, slightly thickened, and also lined with lymph. The left kidney was enlarged to three or four times its ordinary size; its tunica propria was considerably thickened, and in many places elevated by small superficial cysts, containing pus. The whole substance of the organ was of a deep red colour; the cortical part was enlarged, and contained deposits of lymph, and numerous minute abscesses. The uriferous part was similarly, but more extensively diseased; the situation of the papillæ was occupied by irregular masses of lymph; and the pelvis and infundibula much enlarged, and otherwise in the same condition as those of the right, contained much purulent matter.

ST. THOMAS'S HOSPITAL.

Wound of the Arm followed by Aneurism—Effects of Pressure.

THOMAS COLLETT was admitted into William's ward on Sunday, p. m. May 3d, having in a quarrel been stabbed through the left arm with a knife, which passed in an oblique direction between the radius and ulna: the wound on the anterior part of the arm was situated at the commencement of the upper third, over the radial artery.

The people who brought him to the hospital said there had been a good deal of hæmorrhage, and described the blood to have escaped by jets. A surgeon had been called in, who had closed the wound with sutures and compresses.

When admitted he was very faint; the arm was much swollen, and the arteries at the wrist imperceptible: there was likewise great numbness. Ordered to bed; the arm to be supported on a pillow; spirit wash to be kept constantly applied, and when reaction had taken place, a dose of senna and salts.

Half-past 8, p.m.—Swelling of the arm much diminished; arteries at the wrist pulsating rather strongly; bowels had been relieved by the house medicine.

5th.—There is a small pulsating tumor at the wound, on the anterior part of the arm, appearing to communicate with the radial artery, which can be traced both above

and below the tumor. The general swelling much diminished.

Cont. remedia. Mist. Sennæ Comp.
p. r. r.

11th.—The tumor has been gradually increasing in size; is painful on pressure: the pulsation is perceptible to the eye; there is also pulsation at the posterior part of arm, round the situation of the wound there.

13th.—Mr. Tyrrell ordered V. S. ad \mathfrak{z} xij. (the pulse being rather sharp and quick), and a roller to be applied from the fingers to the elbow, a compress of lint to be previously placed over the tumor, and confined with Emp. Rubr.

15th.—Tumor much the same; no increase in size. As pressure above completely stopped the pulsation, a small tourniquet* was applied to the upper arm, in order to diminish the circulation in the brachial artery, and so contrived as not to prevent circulation in the collateral vessels. The roller to be continued on the limb, and V. S. ad \mathfrak{z} vij. Cold applications.

18th.—Pulsation still continues. Tourniquet tightened, so as completely to stop the pulsation.

19th.—Tourniquet was loosened by the patient this morning, in consequence of the pain it occasioned and the tumefaction of the arm. The pulsation in the tumor is certainly diminished.—Contnr.

25th.—Has been no pulsation since five o'clock this morning.

26th.—No pulsation.

27th.—Slight return of pulsation.

29th.—Bandages, &c. removed for the first time; tumor gone; wound not quite healed. There is a circumscribed pulsation, which appears to communicate with the radial artery. The pulsation on the posterior part of arm gone.

Cont. omnia.

1st June.—Pulsation continues, in consequence of the tourniquet having slipped.

5th.—Some pulsation; anterior wound healed; no tumor. In consequence of the tourniquet not affording sufficient pressure on the brachial, and its liability to slip, a common one was applied, contrived so as only to press on the artery.

6th.—No pulsation since yesterday; but in consequence of the swelling of the arm and hand, which is quite cold and benumbed, the tourniquet is to be slightly relaxed.

8th.—No pulsation since the application of the larger tourniquet.—Cont.

* A broad flat piece of board was placed under the tape of the tourniquet on the outer part of the arm, to carry the tape clear of the anterior and posterior surface of the limb, so as not to interrupt entirely the circulation.

13th.—Pulsation very slight.

16th.—No pulsation. Cont. Tourniquet still further relaxed.

July.—Continued improving, and, instead of bandages and tourniquet, Emp. Rubr. was applied from the fingers to the elbow. This was continued till the 30th July, when he left the hospital, with perfect use of the arm, and but a very slight circumscribed pulsation remaining.

ST. BARTHOLOMEW'S HOSPITAL.

Fatal Disease of the Thyroid Gland.

JANE GRIFFITHS, æt. 40, from the county of Lincolnshire, was admitted under Mr. Earle, August 28th, with a tumor of extraordinary size, occupying the whole front and sides of the neck, and pressing on the trachea so as to threaten immediate suffocation.

From what few words she could be heard to articulate, it was ascertained that she had first perceived the swelling only one year since; but that lately it had increased very rapidly, and become a great source of inconvenience to her. There is an indistinct feeling of fluctuation in some parts of the tumor, the whole of which is soft to the touch. Large veins traverse the tumor in different directions.

The poor woman seemed to be in *articulo mortis*, suffering greatly from difficulty of breathing; and nothing was likely to afford any chance of relief. She was supported by pillows in bed, and the breathing thus rendered somewhat easier. Thirty leeches were applied to the tumor, but before the bleeding from these had ceased the patient died.

Dissection.—The integuments were dissected off the tumor, and an incision made into its anterior part, when it was found that the disease was of a medullary nature, involving the whole of the thyroid gland; a thick cream-like fluid, with soft whitish matter, pervaded the whole structure. The disease did not present the usual firmness of substance of common medullary productions; but had a more semi-fluid consistence. The lungs were also diseased throughout, and in them were found small tubercles or cysts, thickly studded, containing a similar matter.

[The following are some of the Cases alluded to at page 81.]

CASE I.—Burn, treated with Nitrate of Silver.

James Harris, æt. 27, by trade a baker, was admitted into Powell's ward, on the evening of the 15th May, with a burn, about the size of a crown piece, on each foot,

which had existed since the early part of the morning. The whole of the right foot, and about the lower fourth of the same leg, were in a state of acute inflammation, which was apparently increasing very rapidly. In the left foot, the inflammation was confined to the neighbourhood of the sore. The *Argentum Nitratum* was immediately applied over the sore and the whole of the inflamed surface of the right leg, its application being extended a little beyond the margin of the inflammation in every direction. An adherent eschar was also formed over the sore on the left foot, and the little inflammation which existed around the sore was subdued by the same application.

16th.—There is no extension of inflammation, and the eschar over each sore is perfectly adherent. The skin, from a state of great tension, has become wrinkled, and much vesicated. After puncturing the vesicles with a finely-pointed lancet, the remedy was again slightly applied over them: this was repeated the following morning, and, with the exception of a dose of *Cal.* and *Jalap.*, nothing further was administered to the patient. He was, however, not discharged from the hospital till the 23d, on account of a rather doubtful eruption which appeared on his body.

CASE II.—Bite of a Cat, treated with Nitrate of Silver.

Francis Uncle, a very stout man, æt. 38, applied at the hospital on Wednesday, the 13th May, about two o'clock, P.M.; states that on the Monday evening previous he was bitten on his thumb in two places by a cat, but felt no uneasiness until this morning, at which period he awoke in excruciating pain. His thumb, fore-finger, and the whole of the dorsum of the hand, as high up as the wrist, are now greatly inflamed, much swollen, and exceedingly painful. The *Argentum Nitratum* was immediately applied over the whole inflamed surface, and its application extended, as in the preceding case, a little beyond the margin.

Ordered *Infus. Sennæ Comp.* ʒij. statim.

14th.—The inflammation has slightly extended in one direction, over which the *Argentum Nitrat.* was again applied. The skin has become much wrinkled and slightly vesicated. There is no pain or uneasiness, and the swelling is evidently much diminished. The vesicles were now punctured, and the remedy again slightly applied: this was repeated the following morning, when the patient requested to be permitted to resume his occupation, which he was able to do on the Monday following.

CASE III.

Wound received in Dissection, treated with Nitrate of Silver.

A medical student having slightly scratched his thumb with a saw, on Friday, August 28, whilst opening a head, felt no inconvenience until the Sunday evening following, when there was slight increase of heat and smarting pain in the part. During the night the pain, heat, and swelling, increased considerably, but by the constant application of cold water, they were so far abated as to prevent any thing further being done in the morning.

1st Sept.—Inflammation in the thumb is again considerably increased, and has extended some distance up the absorbents of the arm, and there is slight tenderness in the axilla. A number of leeches were applied, and after them a bread and water poultice. A large dose of calomel and antimony was taken. Nothing further, with the exception of continuing the poultices, was done until the 5th, when the absorbents became reddened with increase of heat and slight tenderness along their course. There was also increased pain in the axilla, but the thumb was free from pain and heat.

The *Argent. Nitrat.* was now applied along the course of the absorbents, from the wrist nearly to the axilla.

6th.—There is not the slightest tenderness along the course of the absorbents, and the pain in the axilla is greatly diminished. The skin is very much vesicated, and the same treatment as that mentioned in the two preceding cases, was had recourse to.

9th.—The thumb, from a rather too free use of it, has again become much enlarged, hot, throbbing, and very painful. The *Arg. Nitrat.* was now applied in the same manner over the thumb—in less than eight hours it was evidently diminished in size, and in a few days, without any further application or recurrence of unfavourable symptoms, was quite well.

[Though this cannot be called an *Hospital* case, we have taken the liberty of placing it along with the others.]

NOTE FROM MR. COSTELLO.

To the Editor of the London Medical Gazette.

SIR,

In a letter to your Gazette, dated Oct. 6th, Mr. Anthony White is pleased to declare, "that, in any correspondence he may have had with any person in Paris, my name was never mentioned, and that no case was found by him for me or any one else."

I do not quarrel with Mr. White's asser-

this, he continues to use and to exert it; the disturbance increases, the part begins to swell,—he soon finds that he is unable to move it without great pain, and he seeks medical assistance. When you see a case such as this, you will find the inflammatory affection already pretty fully developed, and you will observe that it is characterised by four circumstances: you see that the part is preternaturally *red*, and that it is *swelled*, *hot*, and *painful*. The swelling affects the entire hand, but does not present the same character over the whole of the part. In the immediate situation of the wound, supposing it to be on the finger, or the palm of the hand, you will perceive that the swelling is tense and firm. If the affection has extended from the hand to the forearm, the tumefaction will be of a firm character, particularly about the wrist; but if you examine the back of the hand and forearm generally, you probably find that the swelling is soft, and what we term *oedematous*; you observe also that the swelling is more extended than the redness.

The redness is of a bright scarlet or light crimson tint; that is the kind of colour which we may suppose would be produced in healthy persons by an increased quantity of arterial blood in the part;—it does not exhibit the hue that is produced by venous blood. The redness is most intense in the immediate neighbourhood of the injury, and from this it is gradually shaded off into the part which is sound.

The heat is sensible to the touch, so that, when we put the hand upon the part, we can perceive that the inflamed portion is considerably warmer than the rest. This difference then is obvious to the sense of others, and the patient himself feels a very intense burning heat in the part; but if we come to examine its temperature by the thermometer, we do not find that the actual heat has increased so much as the sensation of the patient might lead us to expect; in fact we do not find that it is beyond the natural temperature of the blood. The temperature of the blood is ascertained to be from 90 to 100 of Fahrenheit's thermometer; and however intense the feeling of heat experienced by the patient, we find that the actual temperature of the affected part does not ascend beyond this in any case of inflammation. This is a point that has been particularly investigated by Mr. Hunter. He excited inflammation in the cavity of the chest, and in the vagina and rectum of an ass; and he found that the temperature of those parts never rose, under any inflammation that he could produce, beyond that of the natural temperature of the blood. If we place a blister on the chest, and then examine the temperature of the part from which the cuticle has been removed, we find that the thermometer will rise about two degrees higher

than when applied to the surrounding uninfamed skin; and if we perform the same experiment on the extremities, we find it ascend four, five, or six degrees, as compared to the adjacent skin, because the temperature of the extremities is naturally lower than that of the parts nearer the centre of circulation. In one instance Mr. Hunter was operating in a case of hydrocele: he introduced a thermometer at the puncture in the scrotum, and found the temperature of the parts to be 92° of Fahrenheit. On the following day, when inflammation had supervened, the temperature had risen to 98½°. This was a considerable increase, amounting to 6½°, yet even here the temperature did not go beyond the natural heat of the blood.

The pain of the inflamed part is, in the first instance, slight, but gradually increases. It is augmented on pressure, and aggravated by any attempt at using the limb. In the first instance the patient experiences something of a dull aching pain, but as the inflammation proceeds it assumes a peculiar character, attended with throbbing, and a sense of pulsation in the part. The patient seems, as it were, to perceive the increased action of the blood-vessels; and this is not merely a circumstance suggested by the sensation of the individual, for if we place the fingers on the arteries leading to the inflamed part, we find that there is a considerable augmentation in the actual force of the pulsations. In inflammation of the hand, which we are now considering, we perceive that the pulse at the wrist of the affected limb is much fuller, stronger, and harder, than on the opposite side. In fact, we often find, if the inflammation be very considerable, that there is a very marked difference in the pulse of the two sides. Under these circumstances this throbbing, or preternatural pulsation, extends perhaps along the arteries as far as the elbow, and may be felt, through the muscles that cover the vessels, in the fleshy part of the arm. In conjunction with this increased action in the principal arterial trunk that leads to the inflamed part, you find a corresponding distention in the veins which convey the blood away from it. When the hand is thus inflamed, if you uncover the limb you see that several veins are manifestly distended; they are as full as though you had placed a ligature round the arm above the elbow, as we do in venesection.

Along with the four remarkable alterations in the condition of the part I have now mentioned, you will find that the function of the inflamed organ is suspended, or at least considerably impaired; that is, the person cannot move the limb without great pain; and when the inflammation has proceeded to its utmost extent, he is altogether incapable of using the affected

part. When the swelling and inflammation continue, and instead of being checked they increase, notwithstanding the means adopted to arrest them, you will then find other changes take place in the state of the part, and these of a very serious and important kind. All the symptoms that I have now described increase in severity; the part becomes greatly swollen; the redness is intense and vivid; and a most severe and agonizing pain is experienced, so as entirely to deprive the patient of rest.

The local action having reached to such an extent at some point that the part can no longer sustain it, that portion loses its vitality, and *mortification* ensues. The skin of the part assumes a dirty, turbid, or black appearance: it is, in fact, dead, mortified, or *gangrenous*. The part thus deprived of vitality is called *slough*. Under a less violent degree of inflammation, matter forms in the part; that is, a thick yellow or white fluid, which is technically called *pus*, is poured out by the inflamed vessels into the substance of the organ. Where it is effused into a spot, and we find a cavity filled with such fluid, the name *abscess* is given to it: this is technically termed *suppuration*. Inflammation, then, occasionally terminates in this way; but in other instances, without proceeding to such an extent as we have above described, the swelling of the part may diminish, the pain and redness may be speedily lessened, the symptoms of inflammation gradually disappear, and the natural state of the part return. It will then recover the power of exercising its proper functions. This is called *resolution*. Under certain circumstances (but not in the kind of inflammation we have now been considering) the symptoms will suddenly and almost immediately disappear; they will go away at once. This sudden disappearance has been designated by the French nosologists *delitescence*: this is derived from the Latin, *delitescere*—meaning, to be concealed or hidden; in fact, it would be equivalent in English to the expression *sudden disappearance*. In the resolution of inflammation there has been a swelling, that is, interstitial deposition, in the texture of the part, which is slowly removed: there is a gradual subsidence of the inflammatory symptoms, and the progress of this natural termination occupies a considerable time. The sudden and immediate removal of inflammation is a different occurrence from this, and I think there is propriety in distinguishing these two terminations from each other; viz. the sudden and immediate disappearance, or the *delitescence* of the French; and the slow removal of the disease, which we call in English *resolution*.

Now in any case in which mortification has occurred in a certain part of the inflamed

member, or in which suppuration may have taken place, you will find that in the neighbourhood of the mortification or of the suppuration, there is a considerable swelling, which is caused by an interstitial deposition of coagulable lymph around the part. After the process which the occurrence of suppuration renders necessary, is gone through, and indeed without this process, wherever thickening or induration does not subside when the inflammation has passed away, there remains a state of parts which, although not distinguished in our language by any particular term, has been alluded to by the French, under the name of *engorgement*. This hardness of the part, which is produced by the interstitial deposition, disappears again, in general, as the inflammation declines; but, in many instances, the function of the part may be seriously injured by it, although the inflammation has not proceeded so far as to cause the more serious changes of mortification and suppuration.

Such are the principal effects produced by inflammation in a part where it occurs: mortification, when in its utmost violence; suppuration and the formation of abscess, in a less severe degree; next interstitial deposition, and consequent enlargement and thickening, which impair the motion and more or less affect the function of the organ; and lastly, the gradual, slow subsidence of symptoms by resolution, or the sudden and immediate disappearance by delitescence.

These various effects usually are described as the *terminations* of inflammation; but this is not a very accurate expression, because in point of fact, the inflammation does not terminate with these occurrences. If mortification take place, or if abscess be formed, the inflammation is not at an end. The symptoms are in part relieved, the swelling is diminished, the pain and the heat are lessened, but the redness continues, with more or less of uneasiness, and it will be a long time before the part returns to its natural state. You can, therefore, by no means say that inflammation has terminated, when mortification and suppuration have taken place: they are parts of inflammation, not the conclusion of the process.

Such are the effects which inflammation produces in the part which is its immediate seat,—such are the primary or local results of this increased action; but we find, at the same time, that other effects are produced, belonging to the head of secondary, or sympathetic, disturbances—effects which, as they involve a considerable number of the organs of the body, have sometimes been called the *constitutional* symptoms of inflammation. We find, in the first place, that the vascular system is sympathetically disturbed—the action of the heart is augmented, and the pulse is full, strong, and frequent.

The nervous system also is deranged: there is pain of the head, as well as of the back and limbs; restlessness, want of sleep,—in some cases even delirium. The digestive organs are obviously and considerably disordered; there is a white tongue; want of appetite, thirst, sometimes even nausea and vomiting; costiveness. The various secretions are suspended, or diminished, and the skin is hot and dry. The mouth is parched; the urine is scanty, high-coloured, and turbid; and in all probability the secretion of the mucous membrane of the alimentary canal is considerably diminished: we may infer this from the obvious effects. These various circumstances taken together constitute the state of sympathetic inflammatory fever; that is, febrile disturbance, produced by local affections. The sympathetic disorder gradually declines, in proportion as the original local mischief becomes lessened. When this takes place, the secretions that have been previously suspended are restored; the circulation, which is relieved by these natural outlets, becomes tranquil; the nervous system is soothed, and appetite returns. Such are the several phenomena of a well-marked attack of inflammation. You observe there is a correspondence in character between the local and general disturbances: where there is a violent local disease, there is an equally severe general disturbance of the system.

We next come to inquire how the changes that I have mentioned in the part can be explained. It is very apparent, I think, from the circumstances already mentioned, that there is an increased quantity of blood sent to the inflamed part, and, also, that there is a greater quantity than natural circulating through it. The increased action or throbbing of the organ, locally; the visible distention of the great venous trunks; the fulness of the small vessels, which is proved by the redness, and the general congestion which we find in all the tissues of an inflamed part, sufficiently prove that there is an increased quantity of blood sent to it. On examination, we find that all the parts, all the textures of the inflamed member, are preternaturally red; they seem to contain a greater quantity of blood-vessels, and these of greater size than natural. This inference is corroborated by an experiment which Mr. John Hunter made on the ear of a rabbit; he excited inflammation of the part, and when it was fully developed, he killed the animal, and injected the arteries of the head; he found that, in the inflamed ear, the vessels were much larger in size and considerably greater in number than in the opposite ear. You will see this account in his work, called "Hunter on Inflammation and the Blood."

These circumstances prove, then, that there is an increased quantity of blood sent

to the inflamed part; but it does not follow from this, that there is a larger quantity circulating through it. A greater quantity of blood might be sent to the inflamed part, and it might, as some have supposed, become stagnant; a greater quantity might be conveyed to a vessel, and yet be prevented from passing through it. This is a notion that has been entertained by some pathologists who have attempted to defend it, but there are other circumstances which, to my mind, prove very clearly that there is not only a larger quantity sent to the part, but actually circulated through it. In the first place, if you make an incision into an inflamed part, you find a larger quantity of blood flows from it than from one that is sound. The phenomena of phlegmonous erysipelas prove this. If you make a cut through the integuments, in cases where the inflammation affects the skin and cellular membrane, you find, from such incision, an immense quantity of blood readily escapes; you observe that a greater number of small arteries bleed freely, and a larger effusion of blood takes place, than under other circumstances. If you perform an operation on an inflamed part (which you ought not to do), or in its immediate neighbourhood, you find a much greater number of vessels bleeding so as to require attention, than if you were cutting into a sound texture. The state of fulness in the vessels is a sufficient proof to me that a larger quantity of blood is circulated through them than in the natural state. If there were merely a larger quantity sent to the part, and it remained stagnant, you would not have the vessels distended; but if the hand and the fore-arm are inflamed, you will be struck with the considerable distention of the vessels. In such cases I have tried this experiment:—it being necessary to bleed an individual, in a case where the hand and fore-arm were inflamed, I had an opening made in each arm, and I found that within the same space of time, dividing the veins at the same moment, about three times more blood flowed from the vessel of the inflamed limb than from those of the sound side. This experiment I have repeated in several instances, and have always found the same result; so that I can have no hesitation in asserting that, in an inflamed part, there is both a larger quantity of blood sent to it, and a larger quantity circulating through it. Our general views of the subject, then, lead us to regard the phenomena of inflammation—that is, the changes which occur in the part itself, and constitute the local symptoms—as dependent upon an increased activity in the circulating system of the part. The redness and preternatural heat are obviously accounted for on the same principles. Both depend upon the increased quantity of blood in the parts. The heat

of the body certainly depends, in a great measure, on the peculiar change on the blood effected in the lungs; and when a larger supply of it is sent to a part, from whatever cause, it obviously follows that the temperature must thereby be increased. In conformity with this view, you find, as I have already intimated, that the temperature of the part never rises above that of the blood. The swelling is to be accounted for partly by the turgescence occasioned by the general distention of the blood-vessels, and partly by the interstitial depositions to which I have already alluded; and the pain will be readily explained by the circumstance of the nerves participating with the other textures in the vascular disturbance. It has been a disputed point whether the pressure of the turgid vessels upon the nerves caused the pain, or the irritation of the nerves gave rise to the vascular turgidity:—it is a question of little moment, and which scarcely admits of a positive answer.

With respect to the general symptoms, they are to be regarded as sympathetic effects, produced by the inflamed part on the several portions of the economy in which they occur; and here we see that the local disturbances act equally on the vascular and nervous systems as on those of digestion and secretion. Another view (and some of the phenomena would seem to justify the idea) is, that the sanguiferous system is, in the first instance, disturbed in consequence of the disorder in the vessels of the inflamed part being communicated to the rest of the vascular system, and thus producing the derangements in the secretive, digestive, and other systems. Both these explanations of the phenomena have been offered.

Having gone through these general views of the state called inflammation, and of the mode in which its obvious phenomena are to be explained, a further question arises respecting what has been called *the theory of inflammation*—that is, an attempt to determine the exact state of the minute vessels of the part which produces the different changes above-mentioned. Now, inflammation is so important a circumstance in the consideration of disease; so very large a portion of all the complaints that we have to treat, is of this nature, and the phenomena that accompany it are so striking, that you will not be surprised to learn that great attention has been paid to it, and many efforts made to trace the affection to its source. I am sorry to say that these have hitherto been unsuccessful. All that we can say of the seat of inflammation is, that there exists an increased activity of the vessels in the part; yet not a state of increased activity merely, but increased activity altered in its mode. In what that alteration

consists, we are unable to determine. It is not simply a state of increased activity, because if the vascular system of the hand were increased in its ordinary action, it might occasion increase in the bulk, but would not produce inflammation. There is an increase of activity, with a great deviation from the normal or healthy state; but we are not able to point out exactly in what the alteration consists. I have adverted to attempts that have been made to explain this on the principle of obstruction in the vessels. The idea of Boerhaave was, that the blood got into certain vessels, and could not pass through them: hence his notion of what he called *error loci*. The opinion of Cullen was, that a spasm took place in the vessels, which prevented the blood from being readily transmitted; this he supposed to be the state of the minute vessels while the action of those leading to them was increased. Others have conjectured that quite a different condition of the minute vessels was present—namely, a want of tone, or what was called *atony*. All these, however, seem to be nothing better than fanciful ideas—not grounded upon an acquaintance with disease. A great many inquirers have armed themselves with microscopes, and they have then excited the circulation in the skin of a transparent part, where the passage of the blood could be seen; in fact, they have attempted to create inflammation artificially, and to note the phenomena produced. But we may observe generally in regard to these investigations, that the different experimentalists have arrived at the most opposite conclusions: some have supposed inflammation to arise from increased activity of the vessels, and increased transmission of the blood; others, again, that there is an atony of the vessels, and obstruction to the passage of their contents. These contradictory results are equally said to have been deduced from direct observation by microscopic inquiry; we, therefore, can place little reliance on statements of this kind; and I must say, that so far as I know, investigations of this nature have not afforded us any real information on the subject of inflammation. We can see that inflammation has its seat in the vessels of the part, and this disordered action resides in the same vessels which carry on the healthy functions, the natural processes of secretion and excretion, and which perform all the active business of the animal economy in a healthy state. Now I may observe, that we do not at present understand what the modifications are in the actions of those vessels which produce the various results we witness in the different organs of the body: we do not know, for example, how it happens that the capillary vessels of one part deposit the substance of muscles; those of another part the substance of bone; of another, of fat; and so on. And as we cannot yet tell what

the difference is in the minute vessels that gives rise to such remarkable differences in the healthy products of their action; so we need not be surprised that we are not able to determine exactly in what the disturbance consists which constitutes the diseased state of inflammation.

[Mr. Lawrence here stated, that having proceeded thus far in describing the general state of inflammation, he would not this evening enter upon the particular parts of the subject; but having a few minutes to spare, he would advert briefly to two or three cases in the hospital, which illustrated some important practical points. These will be found among our Reports, under the head "St. Bartholomew's Hospital."]

OBSERVATIONS

ON THE

Nature of the Labours undertaken by

BARON HEURTELOUP,

FOR THE

IMPROVEMENT OF LITHOTRITY.

To the Editor of the London Medical Gazette.

SIR,

As Baron Heurteloup has allowed me to read the manuscript of a work on Lithotritry, which he is preparing for the press, and it will be some time before it can be published, I have availed myself of his permission to extract such observations as, in the meantime, I think most likely to afford information to your readers on this important subject. With this view, I have much pleasure in forwarding them to you for insertion in the Gazette.

I am, Sir,

Your obedient servant,

J. RUTHERFORD ALCOCK.

October 11, 1829.

From the danger and pain of the operation of lithotomy, scientific men for ages had endeavoured to find some milder means of relieving calculous patients. Chemistry and galvanism were tried in vain, and mechanical means were resorted to; but the only success that attended them was the partial relief of the patient. Some instruments destined to seize small stones lodged in the urethra were the only results. The endeavour by these means to withdraw stones from the bladder, when they were very small, sometimes

succeeded; but the idea of crushing stones, by instruments introduced through the natural passage, had not been put in execution. The belief which all surgeons entertained of the necessity of an instrument being curved, to enable it to be passed into the bladder, was a difficulty which baffled all their efforts; for it was impossible to develop an instrument with this curve that would destroy calculi, often voluminous and hard.

It was not, then, until it was proved that a straight sound, three or four lines in diameter, might be passed, that the attention of surgeons was more particularly and successfully directed to finding the means of breaking up stones in the bladder by an instrument passed through the urethra.

Many mechanical combinations formed upon this principle were the result of their labours; but of all these, two only have received the sanction of experience as fitted for practical purposes.

The one is that known by the name of "perce pierre," or "instrument à trois branches," which was the first employed; and the other is mine, noticed by the Institute, and in which I have endeavoured to obviate the defects of those which preceded them, in cases where the calculi were more than eight lines in diameter.

The art of curing calculous patients, like every other branch of the science, fell far short of perfection in the commencement, and could only be brought to that state by progressive steps of improvement; it was, therefore, not to be expected that the first instruments invented should be the most perfectly adapted to their end.

The means employed might appear very ingenious and satisfactory in the first case, and yet, even while admired, give rise to some ideas for their improvement, by the observation of defects or imperfections. Experience would necessarily suggest ameliorations in proportion as new indications were observed.

It was thus that, after having repeatedly employed the "perce pierre," I found that this instrument became insufficient in proportion as the stone increased in size, and that, to render lithotritry applicable to the majority of cases, it was necessary to devise means of breaking up the stones more promptly, and with less injury to the bladder.

A short description will enable my readers to appreciate the nature and end of the labours I thought it desirable to undertake, with a view to enlarge the limited resources of lithotritry.

The action of the three-branch instrument is limited to making a perforation each time the stone is seized of the diameter of the tube introduced in the urethra; this hole, then, can never be to the extent of the diameter of the stone when it exceeds ten or twelve lines.

It necessarily follows, that the calculus can only be broken after having frequently repeated these inefficient perforations, which can only be done by allowing the stone to fall to the bottom of the bladder, in order to re-seize it and present the stone in another position for the action of the perforator.

It will easily be seen, without bringing any proofs, how much this left to be desired, especially when it was required to break up a stone of a certain size; for, to effect this, it was necessary to seize the stone, in order to perforate it—to *release it*—*retake it*, to make a second hole, and renew this manœuvre until the body was broken. After this, each fragment *was again to be seized*, to submit it to the crushing process. The consideration of these steps certainly gives the idea that this instrument is tedious, and often painful in its application.

I have endeavoured to improve upon this, by means of my own peculiar combinations, and think I have succeeded in rendering that part of the operation which consists in breaking the stones as simple, prompt, and gentle as possible. The stone, seized without difficulty in the bladder, and strongly held, is perforated first by a head, which, at the first attack, makes a hole in the calculus four lines in diameter. This perforation is succeeded, without loosening the stone, by another stilet, adapted to the enlarging the hole already made. I thus excavate the calculus, the centre is reduced to powder, and the circumference falls into the bladder in the form of a shell, or excavated fragments.

If we consider that this result, (the breaking up of the stone, effected with the "*perce pierre*," after a great number of perforations,) is obtained with this system of excavation, by seizing the stone *once*, and submitting

it to the action of the instrument but *once*; that during the operation there is scarcely any movement of the instrument, and the breaking up of the stone takes place in a bladder filled with water previously injected, and which can be renewed at pleasure, the advantages resulting from the use of these instruments, in skilful hands, will be easily appreciated.

To these favourable circumstances must be added the position of the patient and the steadiness of the instrument, which I obtain by means of the little bed, or rather a kind of arm-chair, on which I place the patient, when the volume of the stone is such as to require the use of the excavating instruments. On this bed the patient is seated in a commodious situation, and the instrument grasping the stone is fixed in a kind of vice, which is either moveable or fixed, at pleasure; so that, while the operation is going on, the patient is perfectly unaware of what is passing; and this ought evidently to be the case, since the instrument does not move, the action of the stilet being within it, and in the middle of the water previously injected.

It was for the invention of this instrument for excavation that the "*encouragement*" was awarded to me two years ago, by the learned body which has since conferred upon me the great prize of surgery for the "*important improvements*" I had further effected in the art of lithotritry*.

This last improvement is the instrument I have called *brise-coque*, and which completes the set I have constructed in the intention of curing patients, by means of lithotritry, with the greatest possible chance of success. The operation of crushing the stone was certainly rendered less tedious and fatiguing by its excavation, thus breaking it up at the first attack;—but there was more yet to be done.

The result of the excavation I practised was the reducing the calculus to *shell* fragments, and powder, which last was immediately voided with the urine.

* This prize was awarded by the Institute of France, two years ago, upon the report made of Baron Heurteloup's instruments, by M. Magendie; in the name of the commission formed to decide on the prize of Medicine and Surgery, founded by M. de Montyon. The members of the commission were MM. Portal, Boyer, Chaptal, Dumeril, Dulong, Guylussac, De Clainville, F. Cuvier, and Magendie reporter.—(J. R. A.)

The fragments, though too large to pass by the urethra, were reduced to a state in which the slightest pressure would crush them. It became of importance to construct some means of promptly breaking these shells, against which the excavating instruments were useless.

I first endeavoured to make use of the three-branch instrument, and employed it in the termination of the first operations I performed; but I remarked that the action of this instrument was slow on stones when entire, and left much to be desired even in the destruction of fragments, especially those which were flat and excavated, resulting from the action of the "evidur."

I thought that if I had been forced, by the small diameter allowed for the instruments, to employ an excavating or progressive action, that, now I had only fragments to attack, I might, with advantage, change the system, and replace the slow and gradual action of a drill by the more prompt and energetic one of two branches moved by a peculiar mechanism, so as to break the fragments as soon as seized.

It was the instrument resulting from this that I called the *brise-coque*, as indicative of the use for which it was destined, and in which I have succeeded beyond my hopes in combining the necessary elements for the prompt and perfect destruction of the stones.

This instrument is, in effect, by the facility with which it is manœuvred, the rapidity and energy of its action, at the same time that its movements are gentle, far superior to the *perce pierre* for the destruction of small stones, or the fragments of large ones; for its action must necessarily very much abridge the number of sittings, and the fatigue of the patient; and, consequently, increase the chances of success.

If I have rendered these details sufficiently clear to be understood, it will be observed that I have much abridged the operation; since, 1st, in large stones I have substituted a system of excavation requiring only one attack, and therefore only one seizure of the stone for a system of repeated perforation which required several attacks and searches in the bladder. 2dly, when small stones were to be destroyed, or fragments of large ones, I have replaced the perforating by a grinding system, which, by its powerful action, reduces the stone to

powder much more quickly, and with less fatigue to the bladder.

Such are the modifications which I have introduced in the means for crushing calculi. It was necessary it should be distinctly understood in what these consisted, for they ought to materially change the general results of the operation; for where the three-branch instrument would fail, these instruments completely succeed, which has been already proved by cases.

I have thus, then, in augmenting the chances of cure by lithotrity, by adding to the powers of the instruments, diminished the number of cases which will require the operation of lithotomy. Let us hope that the time will come when the necessity of this operation will be entirely obviated, and when that disease which is with reason looked upon with dread, will become one of little consequence, and quite under the command of our curative means.

Explanation of the Cuts.

These figures shew the comparative action of the two systems for destroying a stone in the bladder; the first is that of repeated perforations, the second the excavation. With this view I have taken two stones which were removed from the bladder of a calculous patient by the operation of lithotomy some time ago.

These two calculi, exactly similar in size and hardness, appeared to me well adapted to shew distinctly the difference between the action of instruments which simply perforate and those which excavate. They were submitted to the action of the instruments in the bladder of a dead body: in the one I made ten perforations with the "perce pierre"; to the other I employed my instruments for excavation. The instruments employed on both stones were three lines and a half in diameter. The plates represent them in the state to which they were reduced by the action of the instruments. The great difference in the effect will be evident from a single glance.

The stone represented in the first three figs. was attacked by the "perce pierre," and though perforated in ten places, is still entire, and far from being in a state to break up. This, nevertheless, required the instrument to be opened

ten times, ten researches to be made, and the stone to be seized as often : it shews, at present, holes in which the branches of the instrument might easily be entangled ; as also in which the perforator might enter, and as often as this happens, its action must of course be unavailable ; and this must often take place. To perform these 10 perforations it required 58 minutes—nearly an hour, which gives some idea of the time that would necessarily be taken up in seizing and reducing all the fragments, even when broken, before they could pass the urethra.

I have only to compare these results with those obtained by the action of the "evidur," to convince every one of the immense advantages the latter must have. In 19 minutes the stone was reduced to a thin shell, easily broken and reduced to smaller morsels by the *brise-coque*. To effect this, I only required to seize the stone once, and instead of at the end of 58 minutes leaving a pierced, but entire, stone in the bladder, in 19 minutes there no longer re-

mained any thing but flat or concave fragments.

The remains of the stone which were found in the bladder of the subject, in the form of excavated fragments, have been accurately drawn. In order to make the excavating action more clearly understood, I have united the two largest fragments with a little gum, to give the concave form to the figure, necessary to make the mode of action more clearly understood. This will account for the line down the middle of the largest shell, in the second set of figures. The piece which has a spiral appearance, I call the base, and this round form is the impression of the instrument. When I began my lithotritic operations, I used to perforate the stone until this part flew out ; but I have since thought it better not to push the perforation so far, but to stop short when three lines from the extreme side or base of the stone, reserving this means to myself of more easily breaking the stone by the resistance of the base.

Action of the "Perce Pierre Vesicale" on a stone 15 lines in diameter, seized and perforated 10 times, and still

entire : it is presented in three aspects, in order to shew all the holes :—

The time occupied was 58 minutes.

Action of the "Evidur" instrument on a stone 15 lines in diameter, seized once, scooped out, and reduced to thin

shells : the different pieces found in the bladder are here represented :—



The time occupied was 19 minutes.

AN ESSAY
ON
ARTIFICIAL TEETH,

BY LEONARD KOECKER,
Surgeon-Dentist, Doctor in Medicine and Surgery.

It may be assumed as undeniable, that general surgery has at present almost attained the summit of perfection with regard to the restoration of some of the most essential parts of the human body by artificial means. Not only artificial limbs, such as arms and hands, legs and feet, but the most prominent, complicated, and delicate parts of the system, as the eyes, the nose, the chin, the lips, and even the tongue, may be rendered so complete an imitation of nature as to deceive, as it regards appearance, the nearest observer. Yet the utility of these parts is, and always will be, more or less imperfect, and little of the natural function of the artificial leg or arm, and still less of the eyes, nose, or tongue, and other artificial substitutes, can be obtained.

Artificial teeth, however, when judiciously and skilfully inserted, may be justly considered to afford greater advantages than all other mechanical substitutes in surgery. They may be rendered almost as useful as the natural teeth, and capable of assisting in mastication, as well as giving a natural appearance to the face, and the power of a distinct and harmonious pronunciation.

It must, however, be considered at the same time, that the obtaining of this degree of utility by art, is not to be acquired without skill; indeed, the insertion of artificial teeth can be properly performed only by means of a comprehensive knowledge of the anatomy and physiology of the teeth, and all the parts connected with them, as well as a minute acquaintance with all their diseases.

The manufacturing of artificial teeth, therefore, cannot be left with safety to the artizan alone, however great his mechanical skill may be, like that of an artificial leg or arm, or even of the eyes, &c. yet this idea is as commonly received at present as it is erroneous and absurd.

So great, indeed, did I find the difficulty of obtaining any useful assistance from the mechanical dentist in America, that, during the whole of my

practice in that country, I was compelled to attend to this laborious branch of the art myself, as well as to the surgical treatment; and, I believe, it is principally in London and Paris, and a few other large European capitals, that the scientific dentist may receive some useful assistance from the mechanic.

Still, even with such assistance, the conscientious dentist will be compelled to add much time and labour to that of the best mechanic, if it be his determination to insert such artificial teeth only as are sufficiently *useful*, as well as permanently *harmless*, to the remaining teeth, and other parts with which they are connected.

Dental surgery, as a branch of the healing art, is yet a very obscure science, and, at all events, not less intricate than any other of its branches. It is of all others the least understood by medical men, as well as by the public at large, and hence the backwardness in drawing a just distinction between the mechanical and the scientific dentist, although there is in reality as great a difference between them as there is between the unpretending surgical instrument-maker who manufactures the artificial limb, and the surgeon whose duty it has been to amputate it.

If the facts just stated are duly considered, we can no longer be surprised at the frequent occurrence of individuals, even of the most exalted station, so much mistaken as to apply to the mechanical dentist for the insertion of artificial teeth, at a period when the various diseases of their mouths require surgical treatment. This sufficiently accounts for the frequent loss of all the natural teeth, after the insertion of a few artificial ones.

The following case is at once a very complete illustration of the pernicious consequences resulting from the injudicious employment of artificial teeth, and of their excellent effects when applied with judgment.

Mr. —, of —, requested my professional assistance in the year 1820; his age was about 55, his constitution delicate, and suffering greatly from an injudicious treatment of his teeth, which he had received at various periods. According to the patient's own account, in consequence of the insertion of a few artificial teeth at an early period of life, and a constant neglect of his own, he had successively found himself compelled

to increase the number of artificial teeth, until, in a period of from ten to fifteen years, all his own teeth had been lost.

He had first two artificial teeth inserted with pivots upon the roots of two incisors; in a few years afterwards he required the use of another, and in a short time the fourth incisor and two cuspid teeth were lost, and replaced in the same manner.

The diseases of his teeth now rapidly increased; his gums became very sore and inflamed, and some of the roots of his incisors became unfit to hold the artificial teeth. The mode of insertion was, therefore, changed to the use of ligatures and ill-contrived springs, &c. and from the mechanical pressure of these means he was gradually losing his natural, and constantly compelled to increase his artificial teeth, until at last he became convinced of the destructive effects which this state was producing upon his health, which induced him to insist upon the removal of all the dead roots and stumps, and the few remaining roots or painful grinders, notwithstanding the opposition of his dentist.

During and after the loss of his own, several double artificial sets of teeth had been successively prepared, but they were so ill made as to keep his mouth constantly sore, and not only greatly to affect his speech, but also his mastication.

The teeth of this gentleman were objects of the greatest importance to him, not less from the circumstance of his being a public speaker, than from the inroads which had been made upon his health and spirits.

A new set of artificial teeth for the upper and under jaw was now prepared, which fitted him perfectly, by which simple means all his sufferings were removed.

Difficulties accompanying the Insertion of Artificial Teeth.

In most instances, no sooner is a tooth of some importance to appearance lost, than the restoration of such a defect by mechanical means is considered an object of the highest moment, without the least attention being paid to the remaining teeth and gums, which are either primarily or secondarily affected by the general morbid state of the mouth.

We look in vain for any information in those standard works which can be

justly deemed capable of giving any scientific information on this important subject; and, I believe, very little essentially useful has been written on this part of dentistry. The celebrated John Hunter, in his "Natural History of the Human Teeth," &c. has not investigated the subject of the mechanical part of dental surgery, and, with respect to the restoration of lost teeth, he confines himself to the transplanting living and dead teeth from the mouth of one individual to that of another. This practice is far more dangerous than the insertion of any kind of artificial teeth: it is happily at present erased from the list of surgical treatment, and abandoned by every surgeon of judgment and integrity. It needs, therefore, no further refutation.

I, nevertheless, saw this treatment revived by a dentist in Philadelphia, in 1818; and in four cases, in which I was subsequently consulted, I had sufficient opportunity of observing the extensive ravages produced by this operation, not only upon all the remaining teeth and the parts connected with them, but also upon the general health of the victims. I shall, however, not extend this essay by a minute detail of these cases, but beg only to refer the reader to a very distressing case of the transplanting of one tooth, which occasioned the most appalling and painful destruction of an amiable young lady, related in "The Medical Transactions of the College of Physicians of London," vol. iii. pp. 325, 338. This one instance is quite sufficient to illustrate the above statement, and to prove the dangerous and fatal effects that almost invariably must follow this practice.

Mr. Joseph Fox, in his excellent work on "The Natural History and Diseases of the Human Teeth," says very little on artificial teeth; but so far as he dwells on the theory and practice of the subject, he sufficiently evinces that his investigation of the mechanical part of dentistry is founded on very general views, and I am not acquainted with any other English author who has sufficiently treated on this part to deserve the particular attention of his readers.

Among the continental authors, may be noticed Angerman, Plaff, Tourdan and Maggio, Bourdet, Folauchard, Gariot, Laforgue, and, lastly, Dr. De-

labarre. Of these, the last has, I believe, treated more extensively on the subject than any other dental writer. His "*Traité de la Partie Mécanique de l'Art du Chirurgien Dentiste*," in two volumes, accompanied with forty-two plates, is exclusively devoted to the mechanical part of dentistry.

But, although Dr. Delabarre is very deserving of the gratitude of the manufacturers of artificial teeth, for the great patience and research, by which he has endeavoured to facilitate their labours, still he has, like all other authors who have preceded him, dwelt very little on the surgical principles under which the different artificial preparations should be adopted; although it cannot be denied that the merits and demerits of all the methods of inserting artificial teeth which he describes, and with other authors recommends, must be entirely dependent on the principles under which they are applied.

Having, in the preceding pages, stated very generally the great advantages to be derived from artificial teeth, when applied with skill, as well as their injurious consequences if inserted without the necessary judgment, I now beg to make a few more particular remarks on those modes and malpractices which ought to be rejected, and to state, at the same time, the principles by which I have been guided in the mechanical part of my practice.

During the greater part of my residence in America I was obliged to unite the entire duty of the mechanical part of my profession with that of the surgical treatment of all the diseases of the mouth; and in a country which, above all others, offers the best school for the practical surgeon dentist. I have, therefore, both from necessity and opportunity, bestowed much attention upon this branch, more especially in all its bearings with curative and preventive treatment. I hope that, in laying before the profession the principles which I have adopted in my own practice for many years, I may not be altogether unsuccessful in rendering myself useful to my brethren.

In forming proper rules for this mechanical part of surgery, it will therefore be best, for the sake of distinction, to take into particular consideration, first, such treatment and practice as is injurious, as well as such as is proper and necessary; secondly, all those circumstances

which are either indicative or contra-indicative of the use of artificial teeth; and, thirdly, such modes of manufacturing and inserting artificial teeth as must be considered either positively or negatively bad, as well as those which are most useful and effective.

Of the Treatment of the Mouth previous to the Insertion of Artificial Teeth.

It must be perfectly evident to every surgeon, that, in a diseased state of the mouth, or its individual parts, as the jaws, sockets, periosteum, gums, or the remaining teeth, the unavoidable bearing of the artificial apparatus cannot be supported without great loss of health, and even gradual destruction of those parts to which the artificial teeth are affixed.

Whether the morbid state of these structures be founded on natural causes only or on the omission of surgical treatment, or whether it be partly aggravated and produced by injudicious treatment, matters very little in point of fact, although the degree of disease must greatly differ, and be much more extensive and complicated, under the latter than under the former circumstances. I have more minutely pointed out those modes of surgical treatment which I deem improper, in my "*Principles of Dental Surgery*;" and I have only to add, therefore, that, in every instance, by the application of artificial teeth, the pernicious effects of such modes are considerably aggravated; and that, under such injudicious treatment, the artificial teeth are rendered an additional exciting cause of all the diseases already affecting the mouth. Such, however, is the propensity of the public to take an erroneous view of the subject, that it generally requires the greatest persuasion to dispose the patient to submit to a proper and permanently useful treatment, while almost invariably he wishes, and not unfrequently persists, in desiring the adoption of such mal-treatment. Should the dentist yield to his request, the patient has one or two artificial teeth inserted, and, from refusing to submit to the treatment indicated by the state of his mouth, his teeth are gradually destroyed, until a whole artificial set becomes requisite, as in Case, No. 1. The injurious results of this practice are perfectly apparent, not only to the

surgeon, but to any one of common sense, by the following considerations. There is, perhaps, not one case in a hundred requiring artificial teeth, in which the other teeth are not more or less diseased, and the gums and alveoli also either primarily or secondarily affected. The mechanical and chemical bearing of the artificial teeth upon such diseased structures, naturally becomes a very powerful aggravating cause of the disease, even if they are well contrived and inserted; if, however, they are not well constructed, and are inserted with undue means or force, or held by too great or irregular pressure, or by ligatures, or other pernicious means for their attachment, the morbid effect is still more aggravated, and a general state of inflammation in the gums and sockets, and particularly in the periosteum, very rapidly follows. The patient, moreover, finds it impossible to preserve the cleanliness of his mouth; and his natural teeth, as well as the artificial apparatus, in combination with the diseases of the other structures, become a source of pain and trouble, and the whole mouth is rendered highly offensive and disgusting to the patient himself as well as to others. Indeed, that such is the fact I may confidently appeal to almost every individual who is now wearing a considerable number or a whole set of artificial teeth.

Thus, by the improper insertion of artificial teeth, the patient not only loses all the good effects of this treatment, but also his own remaining teeth, exposing himself for a considerable period to all the consequent diseases of the mouth, as well as of the constitution; whereas, by a proper treatment, the whole mouth would have been rendered and preserved perfectly healthy, the further loss of teeth would have been almost completely prevented, and the defect so restored as to prevent the necessity of increasing the number of artificial teeth for many years, or perhaps during life.

The too early insertion of artificial teeth after the surgical treatment of the mouth is completed, is also a consideration of no small importance, though too often entirely neglected. Indeed, even after the most judicious treatment of the mouth has been instituted, artificial teeth may be rendered a source of irritation and injury, if applied before

nature has perfectly produced those changes which always follow the extraction of teeth by means of absorption in the sockets and gums; and producing immediate inflammation in the parts not yet perfectly recovered, and soon losing their adaptation to the form of the gums, they must become the cause of constant irritation. Convinced of the truth of the above statement, I have made it an invariable rule during my practice in the application of artificial preparations, to bestow every necessary surgical attention upon each individual part of the mouth which the case required, so as to render the jaws, the gums, sockets, periosteum, and every tooth perfectly free from disease.

[To be continued.]

PECULIAR CEREBRAL AFFECTION IN CHILDREN.

*To the Editor of the London Medical
Gazette.*

SIR,

If you should have a niche in an early number of the Medical Gazette, which you do not know how to fill up in a more profitable way, you may insert the following reply to your correspondent, W. H.*

And, first, let me remark, that if I have had any satisfaction in having published my remarks upon "An Affection of Infancy resembling Hydrancephalus, but arising from Exhaustion," it has chiefly been that it has led to my name having so frequently appeared upon the same page with that of Dr. Gooch. Your correspondent attempts to establish a difference of opinion between Dr. Gooch and myself, inasmuch as I have ascribed the effusion into the ventricles of the brain in cases of exhaustion to congestion of that organ, whilst Dr. Gooch attributes it to an empty state of the cerebral vessels; and he considers that this remark of Dr. Gooch is the most valuable part of the inquiry. He never seems to have suspected that the question may not be fully determined.

I would beg, therefore, just to refer this gentleman to Dr. Kellie's well-known paper, in the first volume of the

* See Medical Gazette, No. 98, p. 84.

Medico-Chirurgical Society of Edinburgh, for a rather full and most interesting inquiry upon this very point. He will there learn that it is a question not quite so easily determined—not quite so perfectly decided as he seems to imagine.

Your correspondent mentions the name of Dr. Abercrombie in such a manner as to leave it probable that I was anticipated in my views of this affection by that gentleman. If your readers will refer to my little essay, they will see that Dr. Abercrombie, as well as Dr. Gooch, were anticipated by me by several years.

I may add that I have very recently witnessed a most interesting case of the affection in question, in consultation with Dr. James Johnson and Mr. Balderson, of Poland-Street, Oxford-Street. The causes, the course, the symptoms, and the remedies, were precisely such as I have pointed out, and the event was such as fully to satisfy us with the propriety and efficacy of the plan of treatment pursued. I am, Sir,

Your obedient servant,
MARSHALL HALL.

London, Oct. 18, 1829.

CYST IN THE ORBIT, OBEYING THE INFLUENCE OF THE MUSCLES.

To the Editor of the London Medical Gazette.

SIR,

IN the second volume of the *Chirurgie Clinique de Montpellier*, Professor Delpech has given a narrative of an extraordinary disorder,—a cyst, which filled the orbit, having annihilated the globe of the eye, and being itself obedient to the muscles which move the ball. The professor deserves the praise for candour, in having given us the history, since his treatment of the malady proved fatal to the patient. The case in the original language is diffusely related; but I have endeavoured so to contract the statement as to omit no sentences which contain practical points. As it appears to be the order of the day in France to publish the pathological history of every man, woman, and child, who dies, it is much to be wished that all irrelevant

matter should be foregone. Men in practice have not a superfluity of leisure for reading. There is a maxim, with which one of our profession prefaced a book, and which should be more impressed on the French medical writers, who make such exorbitant claims on the time of professional readers—"Life is short."

I am, Sir,

Your humble servant,

ROBERT HULL.

Norwich, Sept. 18, 1829.

An Account of a Cyst developed in the Orbit, and prolonged into the Cranial Cavity through the Foramen Opticum.

Louis Bonnet, aged 20 years, enjoying tolerable health, was admitted to the Hospital Saint-Eloi, April 30, 1825. He had, ever since he was eight years old, a considerable tumor, which filled the left orbit, and projected greatly between the eyelids. Upon attentive examination the following were the appearances:—The lids tightened, very distended as to breadth, were separated from each other by an interval of one inch and a half; their skin thin, injected. The intermediate space was convex, projecting, red, covered with a conjunctiva very vascular, fungous, bedewed with tears and puriform mucus. The spot wherein the cornea should have existed, presented scarcely any traces thereof: a brownish tinge was the only mark. The sight had been lost many years, and the eye seemed wasted. The projecting mass appeared to be composed of a tumor placed betwixt the muscles of the eyeball, which moved it, and whose resistance announced a cyst. The tumor fluctuated throughout its extent.

The patient remembered that, at its commencement, he felt a pain rather sharp, for about a month, in the depth of the orbit; that, soon after, the eye seemed lifted, and eventually driven from its cavity, the vision failing proportionally; that ulcerations attacked the cornea, perforated it, and evacuated the vitreous humour.

It was evident that the orbital cavity had acquired extraordinary dimensions. The right eye, the other senses, the intellect, were unchanged. There was no head-ache: the patient was harassed by his malady, because the least variation of atmosphere renewed the inflammation and ulcerations of the conjunc-

tiva. An operation was decided on, with the consent of the patient.

6th May.—We plunged horizontally the blade of a straight bistoury towards the middle of the lower lid, where the tumor seemed most to fluctuate. A transparent, citron-coloured fluid, was spirted out with great force. We were surprised at the quantity; and still more astonished when, introducing a finger into the cavity, we discovered that the cyst was not confined to the orbit, which, however, it entirely lined; but that it was prolonged into the cranial cavity, through the foramen opticum, which was so dilated as to give free passage to the forefinger. The posterior prolongation of the cyst was plunged into the cerebral substance, whose consistence was easily distinguished (!!!). Charpie was introduced lightly into the cavity, and the borders of the wound were parted with a strip of anointed linen.

The patient suffered little the two first days; but, on the third, pains supervened, extending from the wound to the occiput. The features of the patient were profoundly altered; the tongue was red, thirst urgent, the temperature of the body much augmented, the pulse frequent, “*vif et sans consistance.*” Venesection ad $\frac{3}{4}$ x; “*cau de veau nitrée,*” &c. &c. The night was agitated; and there was delirium.

The fourth day.—Pulse quicker, &c. &c. Twenty leeches to each temple. The night less agitated. Stupor.

Fifth day.—Stupor more profound; cognizance quite lost. The legs and thighs were blistered; but death took place in the evening.

Autopsia 18 hours after Death.—Exterior of the cranium and vessels of the brain much injected. Sub-arachnoid cellular tissue infiltrated, semi-opaque, opalized. About three ounces of milk-like serum in the lateral ventricles. A softening of the brain throughout nearly the whole anterior left lobe, approaching to purulence; true pus furnished by the meninges.

A prolongation of the cyst had plunged into the substance of the inferior portion of the left lobe, about three inches of depth, thrusting before it the pia-mater and arachnoid. The cavity of this process contained purulent matter, as did the orbitar portion.

The optic foramen, situated higher

and more backward than its fellow, presented a diameter of more than six lines. The optic nerve had totally disappeared.

In the substance of the *right* anterior lobe of the cerebrum, in a parallel spot below, was another sero-mucous cyst, plunged in the cerebral substance, not pushing back the membranes: it was united to these in a solitary point below and before. It was as big as half a pigeon's egg.

If we admit that the cyst (the left cyst) originated in the foramen opticum itself, this hypothesis will explain all the phenomena.

We see, moreover, that we cannot be sure that such growths are not prolonged into the cranial cavity, because there exists no lesion of the cerebral functions. Must we then abstain from curative attempts in analogous cases? We think otherwise. We think we may succeed in distinguishing those cysts which penetrate within the cranium from such as are confined to the orbit. We think, also, that, in case of a false diagnosis, we may prevent awkward consequences by attention to the following rules:—A puncture with a flat trochar is a mode of exploration entirely innocent, by which we may learn the character of a tumor and of its contents. In a case similar to this, and whilst the fluid is escaping, we may convey into the cavity a soft bougie: this instrument will easily reveal if any danger is attached to further operation. If the extension of the disorder into the cranium be recognized, nothing remains but to withdraw the canula, and leave things to nature: the punctured part heals.

When a case similar to this has not been recognized, until an incision has been made, adhesive straps would suffice to connect the cut edges of the skin, and effect a reunion; but if it be necessary, if we could not otherwise prevent the entrance of air and consequent inflammation, we should not hesitate to employ suture; only it would be specially important to include in the suture integument alone, avoiding the cyst.

CARBONATE OF IRON.

To the Editor of the London Medical Gazette.

Uttoxeter, October 4, 1829.

SIR,

IN the Medical Gazette of Sept. 26th, Dr. Belcombe calls "the attention of the profession to the use of the subcarbonate of iron in chronic rheumatism," and, in concluding his communication, remarks, that "this remedy is only slightly mentioned by Dr. Scudamore, and not at all, as far as he is aware, by other writers."

It may, therefore, be presumed that the Edinburgh Medical and Surgical Journal does not come under Dr. Belcombe's notice; otherwise, he must have been aware of the following passage, occurring in a Report of the Diseases of Birmingham, published in the number of that journal for October, 1823, by my zealous and talented friend, Dr. Darwall, which corroborates, I may say anticipates, his observations:—

"It has been insinuated by some of the journalists, that amidst the numerous successful cases published by Mr. Hutchinson, other diseases may have been mistaken for it (neuralgia). However this may be, several opportunities have been afforded me of proving that the efficacy of the carbonate of iron, in relieving pain, is not confined to that complaint. A case of regular intermittent hemicrania was entirely cured by it, and much relief was conferred upon a case of syphilitic rheumatism, in which the pains came on most severely in an evening. Great alleviation also was effected in an instance of rheumatic gout of long standing, in which the joints were red and swelled. The visible effect upon the digestive organs was similar; great improvement in the appetite and spirits. In one case, accompanied with hysteria, the nervous symptoms and the pain vanished together."

If I mistake not, cases of the above description were communicated by Dr. Darwall to Mr. Hutchinson, and were published, about the same period, by the latter gentleman, in one of the London journals. To Dr. Darwall, therefore, belongs any merit there may be in first "endeavouring to extend the

use of carbonate of iron to other painful disorders."

I have the honour to be, Sir,

Your obedient servant,

ALEX. G. KENNEDY, M.D.

DIVISIONS IN THE HEALING ART.

[THE subjoined letter was inclosed in a note, in which the writer states his belief that it contains nothing offensive; and the one that follows it was accompanied by a request that it might not be inserted if we thought it likely to hurt Mr. Lawrence's feelings. We think it would be paying that gentleman a bad compliment to suppose that he could be "hurt" by either of them.]

To the Editor of the London Medical Gazette.

SIR,

ALLOW me to make a few remarks on a part of Mr. Lawrence's Introductory Lecture, attributing the division between medicine and surgery to monkish darkness and ecclesiastical ignorance. The decree of the Council of Trent, which is quoted, merely renewed a distinction which had existed before—a distinction which medical men had adopted for its usefulness, and continued for their own convenience; at least there could be no other reason for its continuance. In rude and barbarous ages, our whole art was merely operative surgery, and consisted in curing the wounds and bruises received in battle, or sustained by accident. Homer tells us that Podalirius and Machaon were skilful physicians—*ἰητῆς ἀγαθοί*; but proceeds to inform us that their whole employment was

Ἴους τ' ἐκταλινεῖν, ἐπὶ τ' ἥπια φάρμακα παρσσειν—

"to cut out the arrows, and to spread over the wound the soothing salve." They made no attempt to stop the progress of the plague, which ravaged their forces.

But, with the advance of civilization and the march of intellect, Celsus tells us there came in a host of diseases, unknown to the temperate and hardy savage. Then

*Macies et nova febrilium
Terris incubuit cohors.*

It was then this division arose; not arbitrarily enforced by acts of parliament,

or imposed at the will of colleges, but suggested by common sense: necessity gave a hint that, as there was so much to learn, it would be better to learn one part thoroughly than the whole cursorily. So, at least, I think we may infer from Celsus. At the very beginning of his first book, we find—"Post quem (Hippocratem scilicet) Diocles Carystius deinde Praxagoras et Chrysippus tum Herophilus et Erasistratus, sic artem hanc exercuerunt ut etiam in diversas curandi vias processerint. Iisdemque tempori in tres partes medicina diducta est," &c. Does not this imply that Diocles and the rest practised the art in such a manner that each took a separate department, and so medicine was *diducta*—was drawn asunder into three divisions?

But if this passage does not bear me out, turn to the beginning of the seventh book. "Hæc autem pars (~~que~~ manu curat) cum sit vetustissima, magis tamen ab illo parente omnis medicinæ Hippocrate, quam a prioribus exulta est: deinde, post quam *diducta ab aliis habere professores suos* cœpit, in ~~Egypto~~ *Egypto* quoque increvit, Philoxeno maxime auctore, qui pluribus voluminibus hanc partem diligentissime comprehendit. Gorgias quoque et Sostrates. . . . *Multique alii celebres viri singuli quædam reppererunt. Hac Romæ quoque non mediocres professores,*" &c. &c. Surely we learn from this, not only that many volumes were written on surgery at Alexandria, but also that it was practised as a *separate art*, by eminent men, both in that city and in Rome.

But what end does this argumentation answer? Are our abilities so cribbed, cabined, and confined, by the narrow limits of our profession, that we have not each scope enough for our researches? Is there no nook, cranny, or corner, in the undoubted department of the surgeon, which needs research? Is there no fact in physic which needs confirmation, no cloud of error or mist of prejudice which needs dispelling? Truly, when there is not, it will be time enough to dispute about our respective limits; but as things are at present, we had better, perhaps,

First lay this Anglers level with the ground,
Then, after, fight who shall be king of it.

There is a large field for each of us, without approaching the disputed confines; there is quite as much to learn as

will afford ample employment during the years generally allotted to education; and this is what must be considered in speaking to pupils.

Mr. Lawrence himself sanctions some division of this sort, which he elsewhere characterizes as absurd; saying, "Proceeding in *natural* order, you will attend, in the first place, to external diseases; after which, you will proceed to study internal affections." This division, then, cannot be very absurd, if it be natural and useful, though only for learners. Celsus speaks very sensibly on this same subject—"Illud autem omnia scire convenit, quod omnes medicinæ partes ita innexæ sunt, ut ex toto separari non possint; sed ab eo nomen trahant, a quo plurimum petunt."

To this we may all subscribe: granting there be no natural law enforcing the division between medicine and surgery, yet if this division were first made for convenience, and continued for its usefulness—if it be proper for learners—if each department contain as much as can thoroughly be learned in our years of education—then it cannot be very absurd, and should not be hastily attacked. There is no natural division between the jejunum and ileum; yet anatomists have found such division useful, and authorized our continuing it. England is divided in many places from Scotland and Wales, merely by an imaginary line, and yet geographers find such division useful, and continue it, though we are now one people; and if three persons were appointed to learn minutely, in a given time, the geography, productions, &c. of our island, they would act more wisely by making some such division, and communicating to each other the results of their inquiries, than if, acting without concert, each were to attempt the whole work.

I have the honour to be, Sir,
Your very obedient servant,
REGINENAS.

October 10th.

THE MEDICAL MILLENNIUM.

To the Editor of the London Medical Gazette.

SIR,

THE universality and versatility of Mr. Lawrence's genius, have been the subjects of various remarks during a very

AN ESSAY
ON
ARTIFICIAL TEETH,

By LEONARD KOECKER,

Surgeon-Dentist, Doctor in Medicine and Surgery.

It may be assumed as undeniable, that general surgery has at present almost attained the summit of perfection with regard to the restoration of some of the most essential parts of the human body by artificial means. Not only artificial limbs, such as arms and hands, legs and feet, but the most prominent, complicated, and delicate parts of the system, as the eyes, the nose, the chin, the lips, and even the tongue, may be rendered so complete an imitation of nature as to deceive, as it regards appearance, the nearest observer. Yet the utility of these parts is, and always will be, more or less imperfect, and little of the natural function of the artificial leg or arm, and still less of the eyes, nose, or tongue, and other artificial substitutes, can be obtained.

Artificial teeth, however, when judiciously and skilfully inserted, may be justly considered to afford greater advantages than all other mechanical substitutes in surgery. They may be rendered almost as useful as the natural teeth, and capable of assisting in mastication, as well as giving a natural appearance to the face, and the power of a distinct and harmonious pronunciation.

It must, however, be considered at the same time, that the obtaining of this degree of utility by art, is not to be acquired without skill; indeed, the insertion of artificial teeth can be properly performed only by means of a comprehensive knowledge of the anatomy and physiology of the teeth, and all the parts connected with them, as well as a minute acquaintance with all their diseases.

The manufacturing of artificial teeth, therefore, cannot be left with safety to the artizan alone, however great his mechanical skill may be, like that of an artificial leg or arm, or even of the eyes, &c. yet this idea is as commonly received at present as it is erroneous and absurd.

So great, indeed, did I find the difficulty of obtaining any useful assistance from the mechanical dentist in America, that, during the whole of my

practice in that country, I was compelled to attend to this laborious branch of the art myself, as well as to the surgical treatment; and, I believe, it is principally in London and Paris, and a few other large European capitals, that the scientific dentist may receive some useful assistance from the mechanic.

Still, even with such assistance, the conscientious dentist will be compelled to add much time and labour to that of the best mechanic, if it be his determination to insert such artificial teeth only as are sufficiently *useful*, as well as permanently *harmless*, to the remaining teeth, and other parts with which they are connected.

Dental surgery, as a branch of the healing art, is yet a very obscure science, and, at all events, not less intricate than any other of its branches. It is of all others the least understood by medical men, as well as by the public at large, and hence the backwardness in drawing a just distinction between the mechanical and the scientific dentist, although there is in reality as great a difference between them as there is between the unpretending surgical instrument-maker who manufactures the artificial limb, and the surgeon whose duty it has been to amputate it.

If the facts just stated are duly considered, we can no longer be surprised at the frequent occurrence of individuals, even of the most exalted station, so much mistaken as to apply to the mechanical dentist for the insertion of artificial teeth, at a period when the various diseases of their mouths require surgical treatment. This sufficiently accounts for the frequent loss of all the natural teeth, after the insertion of a few artificial ones.

The following case is at once a very complete illustration of the pernicious consequences resulting from the injudicious employment of artificial teeth, and of their excellent effects when applied with judgment.

Mr. —, of —, requested my professional assistance in the year 1820; his age was about 55, his constitution delicate, and suffering greatly from an injudicious treatment of his teeth, which he had received at various periods. According to the patient's own account, in consequence of the insertion of a few artificial teeth at an early period of life, and a constant neglect of his own, he had successively found himself compelled

to increase the number of artificial teeth, until, in a period of from ten to fifteen years, all his own teeth had been lost.

He had first two artificial teeth inserted with pivots upon the roots of two incisors; in a few years afterwards he required the use of another, and in a short time the fourth incisor and two cuspid teeth were lost, and replaced in the same manner.

The diseases of his teeth now rapidly increased; his gums became very sore and inflamed, and some of the roots of his incisors became unfit to hold the artificial teeth. The mode of insertion was, therefore, changed to the use of ligatures and ill-contrived springs, &c. and from the mechanical pressure of these means he was gradually losing his natural, and constantly compelled to increase his artificial teeth, until at last he became convinced of the destructive effects which this state was producing upon his health, which induced him to insist upon the removal of all the dead roots and stumps, and the few remaining roots or painful grinders, notwithstanding the opposition of his dentist.

During and after the loss of his own, several double artificial sets of teeth had been successively prepared, but they were so ill made as to keep his mouth constantly sore, and not only greatly to affect his speech, but also his mastication.

The teeth of this gentleman were objects of the greatest importance to him, not less from the circumstance of his being a public speaker, than from the inroads which had been made upon his health and spirits.

A new set of artificial teeth for the upper and under jaw was now prepared, which fitted him perfectly, by which simple means all his sufferings were removed.

Difficulties accompanying the Insertion of Artificial Teeth.

In most instances, no sooner is a tooth of some importance to appearance lost, than the restoration of such a defect by mechanical means is considered an object of the highest moment, without the least attention being paid to the remaining teeth and gums, which are either primarily or secondarily affected by the general morbid state of the mouth.

We look in vain for any information in those standard works which can be

justly deemed capable of giving any scientific information on this important subject; and, I believe, very little essentially useful has been written on this part of dentistry. The celebrated John Hunter, in his "Natural History of the Human Teeth," &c. has not investigated the subject of the mechanical part of dental surgery, and, with respect to the restoration of lost teeth, he confines himself to the transplanting living and dead teeth from the mouth of one individual to that of another. This practice is far more dangerous than the insertion of any kind of artificial teeth: it is happily at present erased from the list of surgical treatment, and abandoned by every surgeon of judgment and integrity. It needs, therefore, no further refutation.

I, nevertheless, saw this treatment revived by a dentist in Philadelphia, in 1818; and in four cases, in which I was subsequently consulted, I had sufficient opportunity of observing the extensive ravages produced by this operation, not only upon all the remaining teeth and the parts connected with them, but also upon the general health of the victims. I shall, however, not extend this essay by a minute detail of these cases, but beg only to refer the reader to a very distressing case of the transplanting of one tooth, which occasioned the most appalling and painful destruction of an amiable young lady, related in "The Medical Transactions of the College of Physicians of London," vol. iii. pp. 325, 338. This one instance is quite sufficient to illustrate the above statement, and to prove the dangerous and fatal effects that almost invariably must follow this practice.

Mr. Joseph Fox, in his excellent work on "The Natural History and Diseases of the Human Teeth," says very little on artificial teeth; but so far as he dwells on the theory and practice of the subject, he sufficiently evinces that his investigation of the mechanical part of dentistry is founded on very general views, and I am not acquainted with any other English author who has sufficiently treated on this part to deserve the particular attention of his readers.

Among the continental authors, may be noticed Angerman, Plaff, Tourdan and Maggio, Bourdet, Folauchard, Gariot, Laforgue, and, lastly, Dr. De-

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Still, even with such assistance, the conscientious dentist will be compelled to add much time and labour to that of the best mechanic, if it be his determination to insert such artificial teeth only as are sufficiently *useful*, as well as permanently *harmless*, to the remaining teeth, and other parts with which they are connected.

Dental surgery, as a branch of the healing art, is yet a very obscure science, and, at all events, not less intricate than any other of its branches. It is of all others the least understood by medical men, as well as by the public at large, and hence the backwardness in drawing a just distinction between the mechanical and the scientific dentist, although there is in reality as great a difference between them as there is between the unpretending surgical instrument-maker who manufactures the artificial limb, and the surgeon whose duty it has been to amputate it.

If the facts just stated are duly considered, we can no longer be surprised at the frequent occurrence of individuals, even of the most exalted station, so much mistaken as to apply to the mechanical dentist for the insertion of artificial teeth, at a period when the various diseases of their mouths require surgical treatment. This sufficiently accounts for the frequent loss of all the natural teeth, after the insertion of a few artificial ones.

The following case is at once a very complete illustration of the pernicious consequences resulting from the injudicious employment of artificial teeth, and of their excellent effects when applied with judgment.

Mr. —, of —, requested my professional assistance in the year 1820; his age was about 55, his constitution delicate, and suffering greatly from an injudicious treatment of his teeth, which he had received at various periods. According to the patient's own account, in consequence of the insertion of a few artificial teeth at an early period of life, and a constant neglect of his own, he had successively found himself compelled

Irish apothecaries held in that city recently are ludicrous in the extreme: it would require the pencil of a Hogarth to do them justice. We could hardly believe that we were reading of the transactions of a sober body of men, met together for the protection of their rights, and for the serious purpose of reform. The whole proceeding rather reminded us of a "barring out" at school in the Christmas holidays. When we found, indeed, that there was to be a dinner at the upshot of the business, we had no objection, sensible as we are that all "enterprizes of great pith and moment" at the present day invariably end in that way. Considering, however, how serious an aspect things wore at one stage, we cannot but express our admiration at the happy issue to which they have been so cleverly brought—no matter by what means. What seemed likely to come to blows came only to a banquet; their "stern alarms were changed to merry meetings;" and our grave friends eventually drowned all their animosities in a bowl of punch.

It was a sort of aggregate meeting of the "art and mystery" which assembled in the Irish metropolis, and reform was the order of the day. For a considerable period, it seems, the corporate body, styled the Governor and Company of the Apothecaries' Hall, (established in 1791) has failed to give general satisfaction to the apothecaries of Ireland. Yet, if one might form an opinion from the opposite and apparently counterbalancing charges brought against the Hall, there would seem to be a possibility of its not being totally in the wrong. One party complains that the company (with whom rests the power of examining and of conferring licenses) bestow their honors too lavishly, and admit unqualified persons into the profession for the lucre of a paltry consideration; whilst another as loudly exclaims against the narrow monopoly of the Hall, and would be sa-

tisfied with nothing short of its utter abolition. All parties, however, seemed to agree that abuses did exist, and imperatively demanded redress. In this state of things the dissentients were fortunate enough to find a leader in Mr. Donovan, one of the most able chemists in the kingdom; and, as it happens, actually the governor of the company for the present year. Under his auspices it was hoped that an adjustment of the disputed points might be amicably effected, without prejudice to the interests of the corporation; and we believe we may congratulate the parties on the likelihood of an object so desirable being about to result from the labours of the newly-appointed committee. The transactions of the meeting, or rather of the series of meetings, of which we have given a rude outline, are too curious to be passed over so slightly; we must find room for a few particulars.

The aggregate meeting of the Licentiate Apothecaries of Ireland was held in the Apothecaries' Hall, Dublin, on Thursday, October 1st,—the Governor, Mr. Donovan, in the chair.

The chairman, in his opening address, dwelt on the necessity of the due observance of decorum. It was most probable they should be able to obtain a new legislative enactment to govern their body; and it was for the common interest, that whatever enactment should pass, the legislature should be such as would make their profession as high in public estimation as it ought to be. With such an object the present meeting had been convened, and he thought they were competent to entertain any question they pleased. He hoped no virulent observations would be introduced, or any topic brought into discussion which would tend to fritter away their time unnecessarily.

Several gentlemen requested to know what measures the Directors meant to adopt; upon which Mr. Madan, their

labarre. Of these, the last has, I believe, treated more extensively on the subject than any other dental writer. His "*Traité de la Partie Mécanique de l'Art du Chirurgien Dentiste*," in two volumes, accompanied with forty-two plates, is exclusively devoted to the mechanical part of dentistry.

But, although Dr. Delabarre is very deserving of the gratitude of the manufacturers of artificial teeth, for the great patience and research, by which he has endeavoured to facilitate their labours, still he has, like all other authors who have preceded him, dwelt very little on the surgical principles under which the different artificial preparations should be adopted; although it cannot be denied that the merits and demerits of all the methods of inserting artificial teeth which he describes, and with other authors recommends, must be entirely dependent on the principles under which they are applied.

Having, in the preceding pages, stated very generally the great advantages to be derived from artificial teeth, when applied with skill, as well as their injurious consequences if inserted without the necessary judgment, I now beg to make a few more particular remarks on those modes and malpractices which ought to be rejected, and to state, at the same time, the principles by which I have been guided in the mechanical part of my practice.

During the greater part of my residence in America I was obliged to unite the entire duty of the mechanical part of my profession with that of the surgical treatment of all the diseases of the mouth; and in a country which, above all others, offers the best school for the practical surgeon dentist. I have, therefore, both from necessity and opportunity, bestowed much attention upon this branch, more especially in all its bearings with curative and preventive treatment. I hope that, in laying before the profession the principles which I have adopted in my own practice for many years, I may not be altogether unsuccessful in rendering myself useful to my brethren.

In forming proper rules for this mechanical part of surgery, it will therefore be best, for the sake of distinction, to take into particular consideration, first, such treatment and practice as is injurious, as well as such as is proper and necessary; secondly, all those circumstances

which are either indicative or contra-indicative of the use of artificial teeth; and, thirdly, such modes of manufacturing and inserting artificial teeth as must be considered either positively or negatively bad, as well as those which are most useful and effective.

Of the Treatment of the Mouth previous to the Insertion of Artificial Teeth.

It must be perfectly evident to every surgeon, that, in a diseased state of the mouth, or its individual parts, as the jaws, sockets, periosteum, gums, or the remaining teeth, the unavoidable bearing of the artificial apparatus cannot be supported without great loss of health, and even gradual destruction of those parts to which the artificial teeth are affixed.

Whether the morbid state of these structures be founded on natural causes only or on the omission of surgical treatment, or whether it be partly aggravated and produced by injudicious treatment, matters very little in point of fact, although the degree of disease must greatly differ, and be much more extensive and complicated, under the latter than under the former circumstances. I have more minutely pointed out those modes of surgical treatment which I deem improper, in my "*Principles of Dental Surgery*;" and I have only to add, therefore, that, in every instance, by the application of artificial teeth, the pernicious effects of such modes are considerably aggravated; and that, under such injudicious treatment, the artificial teeth are rendered an additional exciting cause of all the diseases already affecting the mouth. Such, however, is the propensity of the public to take an erroneous view of the subject, that it generally requires the greatest persuasion to dispose the patient to submit to a proper and permanently useful treatment, while almost invariably he wishes, and not unfrequently persists, in desiring the adoption of such mal-treatment. Should the dentist yield to his request, the patient has one or two artificial teeth inserted, and, from refusing to submit to the treatment indicated by the state of his mouth, his teeth are gradually destroyed, until a whole artificial set becomes requisite, as in Case, No. 1. The injurious results of this practice are perfectly apparent, not only to the

surgeon, but to any one of common sense, by the following considerations. There is, perhaps, not one case in a hundred requiring artificial teeth, in which the other teeth are not more or less diseased, and the gums and alveoli also either primarily or secondarily affected. The mechanical and chemical bearing of the artificial teeth upon such diseased structures, naturally becomes a very powerful aggravating cause of the disease, even if they are well contrived and inserted; if, however, they are not well constructed, and are inserted with undue means or force, or held by too great or irregular pressure, or by ligatures, or other pernicious means for their attachment, the morbid effect is still more aggravated, and a general state of inflammation in the gums and sockets, and particularly in the periosteum, very rapidly follows. The patient, moreover, finds it impossible to preserve the cleanliness of his mouth; and his natural teeth, as well as the artificial apparatus, in combination with the diseases of the other structures, become a source of pain and trouble, and the whole mouth is rendered highly offensive and disgusting to the patient himself as well as to others. Indeed, that such is the fact I may confidently appeal to almost every individual who is now wearing a considerable number or a whole set of artificial teeth.

Thus, by the improper insertion of artificial teeth, the patient not only loses all the good effects of this treatment, but also his own remaining teeth, exposing himself for a considerable period to all the consequent diseases of the mouth, as well as of the constitution; whereas, by a proper treatment, the whole mouth would have been rendered and preserved perfectly healthy, the further loss of teeth would have been almost completely prevented, and the defect so restored as to prevent the necessity of increasing the number of artificial teeth for many years, or perhaps during life.

The too early insertion of artificial teeth after the surgical treatment of the mouth is completed, is also a consideration of no small importance, though too often entirely neglected. Indeed, even after the most judicious treatment of the mouth has been instituted, artificial teeth may be rendered a source of irritation and injury, if applied before

nature has perfectly produced those changes which always follow the extraction of teeth by means of absorption in the sockets and gums; and producing immediate inflammation in the parts not yet perfectly recovered, and soon losing their adaptation to the form of the gums, they must become the cause of constant irritation. Convinced of the truth of the above statement, I have made it an invariable rule during my practice in the application of artificial preparations, to bestow every necessary surgical attention upon each individual part of the mouth which the case required, so as to render the jaws, the gums, sockets, periosteum, and every tooth perfectly free from disease.

[To be continued.]

PECULIAR CEREBRAL AFFECTION IN CHILDREN.

*To the Editor of the London Medical
Gazette.*

SIR,

If you should have a niche in an early number of the Medical Gazette, which you do not know how to fill up in a more profitable way, you may insert the following reply to your correspondent, W. H.*

And, first, let me remark, that if I have had any satisfaction in having published my remarks upon "An Affection of Infancy resembling Hydrancephalus, but arising from Exhaustion," it has chiefly been that it has led to my name having so frequently appeared upon the same page with that of Dr. Gooch. Your correspondent attempts to establish a difference of opinion between Dr. Gooch and myself, inasmuch as I have ascribed the effusion into the ventricles of the brain in cases of exhaustion to congestion of that organ, whilst Dr. Gooch attributes it to an empty state of the cerebral vessels; and he considers that this remark of Dr. Gooch is the most valuable part of the inquiry. He never seems to have suspected that the question may not be fully determined.

I would beg, therefore, just to refer this gentleman to Dr. Kellie's well-known paper, in the first volume of the

* See Medical Gazette, No. 98, p. 84.

Great attention was paid to the man, during the time he continued in the hospital, by his dresser (Mr. Workman), as well as by the surgeon. This the man acknowledged before he left the house. The case went on as fractured thighs usually do, with the exception of the swelling of the leg. At about the end of the seventh week, on Thursday, the 6th of July, Mr. Key had the splints removed, in order to ascertain the condition of the fractured bone: the bone was found on this day to have united in a good line, but the union did not appear to be sufficiently strong to bear the weight of the limb, and the patient was cautioned against using it with any degree of roughness. The long thigh-splint was ordered to be discontinued, and the limb to be laid upon pillows. On the Monday following (July 6th) Mr. Key, in the presence of about twenty pupils, raised the limb gently, and again made a careful examination of it, and re-stated his opinion that a week or two must elapse before he would gain any degree of power in it; once more warning the man that any undue effort of the limb would only retard his recovery. On the Wednesday following the dresser met Mr. Key, and requested him to see the man, as the bone appeared to be broken, and he was about to leave the hospital. Upon seeing the limb, Mr. K. said to him, "Grant, what have you been doing with your limb—how comes it broken again?" "Oh, Sir," he replied, "you broke it yourself on Monday when you examined it."—"Why did you not mention it when I was at your bedside: did you mention it afterwards to the dresser?" Answer, "No."—"To the sister, nurse, or any of the patients?" Answer, "No."—"It is all nonsense; you have been using your leg improperly, and are now laying the evil consequences to me; however, the limb must be replaced in the splints, and you must have three or four weeks more confinement."

In the afternoon of the same day, as Mr. K. was quitting the hospital, the porter put a note into his hand, the contents of which were to urge Mr. K. to be on his guard, as there was good reason to suspect certain individuals were endeavouring to make use of Grant's case as the means of exciting popular feeling against Mr. Key individually, and Guy's Hospital in general.

Mr. K. therefore, returned into the hospital square, where, finding two or three dressers and some pupils assembled, he requested them to accompany him to the bedside of the patient. Calling for pen, ink, and paper, he said, "Now, Grant, I come to investigate this matter to the bottom; I am determined to know the whole truth of this accident to your thigh." Mr. Key then repeated the questions about the manner in which the thigh was fractured a second time, and received the same answers. "Now," said Mr. K. "be upon your guard, and tell me all that has occurred since I left you on Monday morning, as I understand that some designing persons have been persuading you to charge me with having broken the bone, and you must be yourself well aware of its being wholly untrue. The examination having been publicly made in the presence of the pupils, the circumstance of the bone being broken could not have escaped being noticed. Is it likely, if the bone had been broken, that you should have taken no notice of it either to myself, to the dresser, the sister, the nurse, or to the patients? Now, in the first place, how is it that your limb is not supported with pillows as Mr. Workman, the dresser, left it—who has taken them away?" Answer, "I don't know, Sir."—"Mr. Workman, have you taken them away?" Mr. Workman replied in the negative.—"Has the nurse taken them away?" The nurse declared she had not. It was at length discovered that the patient had himself taken away the pillows from under his limb, and was at that moment lying upon them. The motive for this deception Mr. Key could not discover, but proceeded to interrogate him further. "Have you been using any improper violence with the limb since I left you on Monday morning?" Answer, "No, Sir; I have remained in the same position in which you left me exactly."—"You will take your oath that no one has disturbed your limb, and that you have strictly obeyed my injunctions of keeping quiet?" Answer, "Yes, Sir, I will."—The nurse, who was present at the latter part of this interrogation, immediately said, "Sir, it is all false; for on Monday evening, at his own request, I made his bed; and although I advised him to the contrary, he would get up and sit in a chair."—"So, then,"

said Mr. Key, "I am now coming at the truth: you have been out of bed, although I particularly enjoined you to be quiet, and have broken your own leg, and now lay it to me. However, I forgive you, if you will discover to me who has been instigating you to tell these falsehoods. Nurse," said Mr. Key, "did he complain to you of his limb being broken when he got out of bed—was his limb supported by any splints while he was sitting in the chair?" Answer, "No."—"Do you now confess that you have been out of bed?" Grant confessed that he had.

It was thus entirely by accident that Mr. Key became acquainted with an underhand attempt to persuade this man to give a false statement as to the nature of the accident, with a view of injuring the professional character of his attendant; and had the patient been allowed to leave the hospital without the above information as to his getting out of bed having been publicly drawn from him, the attempt would most likely have succeeded. Fortunately, however, not only was the design discovered, but, by a timely investigation, the attempt has been frustrated. We shall only add, that the individuals concerned are perfectly well known to us, and that we shall keep a watchful eye on their future proceedings.

VACCINATION FROM THE COW.

SOME cows, in Hyde-Park, were recently affected with an eruptive disease on the udder, supposed to be *cow-pock*. Two attempts were made to propagate the disease to the human subject, but in both instances the experiment proved inefficient. In one case, no apparent effect was produced, and in the other only a transient and incomplete papulation resulted, and which died away without running on to vesication. At the time we saw the disease in the cow, it had passed into the form of crusts, from beneath which oozed a certain quantity of purulent matter. The genuine vaccinia in the cow would appear to be a rare disease in this part of

England: several attempts, similar to the above, have been made here, with an equally unsatisfactory result.

DEATH OF M. PELLETAN.

PELLETAN, the pupil and successor of Desault, died at Paris on the 26th of September, in the 83d year of his age, having for some time laboured under a chronic affection of the urinary organs. M. Pelletan, for many years, was at the head of his profession, and enjoyed the principal practice of the French capital. He was a man of good, rather than of brilliant talents; but was much respected for his amiable disposition and honourable conduct. Latterly he was thrown a good deal into the shade, partly by the infirmities of his advanced age, and partly by the more aspiring qualities of M. Dupuytren, who succeeded him at the Hotel Dieu. Pelletan was much followed as a teacher, being possessed of considerable eloquence; and during thirty years his renown extended over Europe. Yet so completely has he been forgotten of late years, that we believe few in this country were aware that he yet lived.

QUERIES.

To the Editor of the London Medical Gazette.

SIR,

If any of your readers will be kind enough to explain the subject of the following queries, he will oblige,

Yours, &c.

R. G.

Sept. 28, 1829.

1. Seeing that the inferior oblique muscle of the orbit is supplied from the motor oculi, which is a nerve of voluntary motion, how is that muscle concerned, as seems to be the opinion of some that it is, in rolling the ball upwards when the eye-lids are closed, which is an involuntary motion?—(See a lecture by Mr. Bell in the first volume of the *Gazette*.)

2. What is the use of the superior oblique?

EXTRACTS FROM JOURNALS,

*Foreign and Domestic.*EXTRACTION OF CATARACT BY MEANS
OF AN INCISION THROUGH THE
UPPER PART OF THE CORNEA.

THIS method, according to Graefe, offers numerous advantages over those more usually adopted. The consequences of the wound are less severe, and the sight is more perfectly relieved, because the lower part of the cornea remains untouched, and preserves its natural clearness and convexity. In eighteen individuals operated upon by the superior section, seventeen recovered their vision; in one only the cornea on one side became opaque, and this in consequence of a gouty inflammation which frequently returned.—*Bulletin des Sciences Médicales.*

APPLICATION OF A CONCENTRATED
SOLUTION OF NITRATE OF SILVER
TO THE EYE.

This method has proved so useful in atonic and obstinate ophthalmia, with copious discharge, that M. Graefe thinks it his duty to direct the attention of practitioners to it. The method adopted is to insinuate a drop of the solution, with a hair pencil, between the eyelids.—*Ibid.*

In this country, the above method is by no means unknown.—E. G.

NEW METHOD OF REMEDYING RUPTURE
OF THE PERINEUM.

M. Dieffenbach, of Berlin, who has published a work on the various methods of supplying mutilated parts of the body, suggests the following in rupture of the perineum:—After having wiped the lips of the lacerated part, and arrested the bleeding, he passes a curved needle, armed with a very strong thread, through the middle of the wound, and brings together the two sides of the fissure; but, in order to prevent the wound from being opened by the elasticity of the skin, he makes use of a very simple and ingenious contrivance, namely, making an incision in the soft parts in the same direction as the laceration:

thus the lips of the new wound gape, the suture no longer suffers any dragging, and the consolidation takes place with perfect ease. M. Dieffenbach employs no bandage to retain the suture, which, owing to the lateral incisions, requires no support; neither does he use any plugs, or sponges—nor, in fact, any thing else except cold applications.—*La Clinique.*

EFFICACY OF THE POMEGRANATE IN
TAPE-WORM.

A man, aged 37, pale and thin, had passed during six years rings of the *tenia*, which came away to the extent of five or six daily, causing excessive itching of the anus at each time. On one occasion he spontaneously expelled ten feet and a half of the worm. The patient calculated that he had passed in all as much as 3000 portions of worms, besides the 10 feet above mentioned, and 12 more which were brought away by remedies. M. Delaporte, by whom the case is related, made him take two ounces of the decoction of pomegranate root, and at the end of an hour and three quarters the patient expelled at once, and almost without any griping pain, twelve feet of a *tenia*, furnished with the head. It is extraordinary, adds the Doctor, that a remedy so efficacious and simple should be so little used.—*Journal Général.*

LACHRYMAL CALCULUS.

A middle-aged woman experienced pain, during two years, on the left side of the nose, with frequent fits of sneezing, and other symptoms of catarrh. Afterwards, a dryness of the nostril came on, with swelling and complete obstruction on the left side of the nose. This was followed by the sensation of a moveable body in the nose, and, soon after, she passed a concretion of some size from the nostril. It was nine lines in length and five in breadth; its colour was a brownish grey, and its structure very compact. Being cut across with a saw, its centre was found to consist of a cherry-stone, round which, concentric layers of different colours were ranged—green, brown, and white: the patient was unable to call to mind any circumstance connected with the introduction of the foreign body into the nose.—*Bulletin des Sciences Médicales.*

EXTIRPATION OF THE RECTUM.

M. Lisfranc has, in two cases, removed three inches of the lower part of the rectum. The patients have done well. One was operated upon five, and the other two weeks ago.—*Archives Générales*.

HIGH OPERATION FOR THE STONE—
LARGE CALCULUS.

M. Lisfranc lately presented to the Royal Academy of Medicine a urinary calculus, weighing seven ounces, which he removed by the high operation. Of three patients on whom he has performed lithotomy by this method, two, in whom he introduced a catheter into the bladder by the urethra, died in consequence of the infiltration of urine by the wound; in the third, the canula of M. Amussat having been placed in the wound, the urine did not escape into the surrounding tissues, and the patient is in a fair way of recovery.—*Ibid*.

mentations of rose-water, and afterwards cold spirits and water, without avail. On the 6th of September she was admitted at La Charité. The ball of the eye was slightly tumified; the vessels of the conjunctiva injected; the cornea of the affected side more prominent than the other, and perceptibly softer; behind it was seen an effusion of blood, occupying the lower part of the anterior chamber, changing its place with the movements of the head, and rising to a level with the edge of the pupil. The head-ache and pricking continued but slightly. The pulse was natural, but there were night sweats.

As this patient exhibited, at the same time, signs of gastric disturbance, an emetic was ordered on the 7th; which was the only treatment adopted till the 10th, when an astringent wash was prescribed; but, as yet, the blood effused has not been re-absorbed.—*La Lancette*.

HOTEL DIEU.

*Restoration of a great portion of the
Cheek by Operation.*

A CHILD, nine years of age, was affected with gangrenous inflammation, which destroyed the soft parts constituting the lower half of the right cheek, and extending from the symphysis to the angle of the lower jaw. The breach of surface was $1\frac{1}{2}$ inch in diameter in every direction. It left but a few lines of the commissure of the lips, and anteriorly was blended with the opening of the mouth. Backwards, it terminated a third of an inch from the anterior border of the masseter; beneath, it nearly reached the basis of the jaw. In the centre of the opening was seen the tongue, which had formed preternatural adhesions by which its movements were impeded, and mastication and deglutition rendered difficult. Another inconvenience, still more formidable, was the constant escape of the saliva. M. Dupuytren tried, about two months ago, to destroy the adhesions of the tongue, but his efforts have been nearly unavailing, as it has always united itself again to the edges of the perforation. About the middle of August, he directed his attention to the removal of the gap by which the saliva escaped. His plan

HOSPITAL REPORTS.

LA CHARITÉ.

Apoplexy of the Eye.

APOPLEXIES have prodigiously increased since the time of Laennec: thus we have apoplexy of the lungs, of the liver, of the skin, &c.; and to these we are now, it seems, to add apoplexy of the eye. Louisa Martin, aged 45, ceased to menstruate during three months without inconvenience. She had suffered some injury of the eyes in early life, from small-pox, and had always had weak sight. To these symptoms had lately been added some appearance of incipient cataract, and within the last twenty days she had been affected with an acute and permanent pain on the right side of the head, with throbbing. Besides this, however, there was no change in the habitual state of her eyes till the night of the 28-9th of August, when she experienced a sharp pricking in the right eye, giving the sensation of a foreign body, which she endeavoured to get rid of by rubbing the part. In the morning she found that the sight of that eye was lost. She applied fo-

was to borrow a flap of skin from the neck, to twist it, and apply it to the opening, having first cut the edges, so as to afford a raw surface. M. Serres, a young surgeon, of Montpellier, who saw the patient, suggested a proceeding analogous to that adopted for hare-lip. To this M. Dupuytren objected that the cicatrix thus formed would be kept constantly on the stretch, and that this would cause irritation, if not disorganization. At the same time, he acknowledged the risk of the flap sloughing, and that, even if it united well, it would still be without the buccinator muscle.

On the 30th of August, M. Dupuytren performed the following operation. He traced a flap on the lateral and upper part of the neck, anterior to the sterno-mastoideus; and having cut the edges of the breach in the cheek, he dissected the flap with care, avoiding to wound the external jugular vein; then twisted it on its pedicle, and fixed it by five points of suture. The wound in the neck was immediately united by means of three needles: the operation was long and painful. One or two small arteries were tied, and the patient replaced in bed, without any dressings having been applied. The first night was passed without accident; the child had some hours sleep.

Sept. 2d.—Moderate fever. The flap is alive; some points of suppuration on its edges.

During the night of the 2-3d, some delirium. Inflammation more intense. The flap beginning to separate from the lower part, in consequence of the suture tearing through the lip, it was retained by straps. Next night, delirium more severe; the flap separated at another point, and the opening extending between the two presented a vertical separation about an inch long. The fever now ran high, and the suppuration became fetid. The posterior and upper part of the flap appeared to live, and to have contracted from adhesions. The external edge seemed to be dead. All the sutures were now removed, and the parts supported by means of straps.

5th.—The symptoms abated; some points of suppuration continue on the edge of the flap, but the success of the operation is secure, with the exception of the separation above-mentioned, which will admit of remedy by the common process for hare-lip.

22d.—The consolidation of the parts being complete, the edges of the aperture which remained were pared and brought together with four twisted sutures. After this the case went on well, and the only remaining evil is the adhesions of the tongue. These, M. Dupuytren means, if possible, to destroy.—*La Lancette*.

HOSPITAL SAINT ANTOINE.

Amputation of the Thigh—Torsion of the Arteries.

A GIRL, seventeen years of age, reduced by suffering, but of good constitution, had the extremity amputated for "white swelling" of the knee. The operation was performed Sept. 21st. The crural and a small artery were completely twisted three times on their axis; after which, the soft parts were immediately united by means of straps, compress, and bandage. On the 24th, no accident of any kind had occurred. M. Velpeau then dressed the stump; every thing was renewed except the straps; there had been the slightest imaginable exudation of sanguineous serum, and the process of union had commenced.—*La Lancette*.

This patient gradually sunk, and died Oct. 2, from circumstances quite unconnected with the *torsion* of the arteries, the only interesting point in the case. There had been no bleeding. The femoral artery was pervious throughout, and there was no trace of inflammation. It is not mentioned whether there was any appearance of a plug.

ST. BARTHOLOMEW'S HOSPITAL.*

Wound of the Lung.

IN the course of last week a patient was admitted into the hospital with a wound of the lungs. He was a butcher, and when employed in killing sheep, the knife, by some accident, was thrown against the upper part of his chest. On the right side there appeared a puncture; the wound was half an inch in length. He was brought to the hospital soon after, and it was found that emphysema, in a moderate degree, had taken place in the neighbourhood of the wound; and that there was an extravasation

* Observations lately made by Mr. Lawrence, at the conclusion of one of his lectures.

of blood, manifested by its expectoration. These were two circumstances which, viewed in combination, shewed that the lung had suffered direct injury. In this case the breathing was not much disturbed—there was a little irregularity in it, not such as to indicate that any serious difficulty existed, but only such kind of disturbance as might naturally be supposed to arise from the circumstances. The treatment in this case consisted of free bleeding, about fifty ounces of blood being abstracted on the day of his admission; he was freely purged, placed in bed, and kept quiet. These means completely removed all the symptoms connected with inflammation, and the patient has gone on from that time without a single unpleasant occurrence. He is now in the ward, and apparently quite well; at least there has been no unfavourable symptom since the accident (about four days ago), that would lead us to suppose that a serious wound had been inflicted on the lung. It is a proof that the injury of a part, involving considerable danger, will, in some cases, go on well.

Question of immediate Amputation in Cases of severe Injury.

There is a patient in Darker's ward who has undergone amputation of the leg below the knee: there was also another patient who lately left the hospital that had the thigh amputated. I mention these cases because they tend to throw light on a point of great importance. In many instances of serious injuries, such as fractures, gun-shot wounds, and, in fact, in all cases where it is apparent that the part will require to be removed, it becomes a question whether this ought to be done *immediately*, or the operation be *delayed*, and if so, how long delayed? My opinion is, that in all such cases you should operate immediately. Though I say immediately, it sometimes happens that certain nervous symptoms, such as great faintness, coldness, and alarm, are produced by serious accidents, and in this state of depression of the vital powers, the performance of the operation is not advisable; therefore, by immediately, I should say within ten hours after the reception of the injury. In both the cases alluded to, the result of the operation has been favourable. In the woman, who was about fifty years of age, and had been knocked down by a carriage, the wheel of which passed over her leg, and dreadfully fractured the bones, the operation was performed under very disadvantageous circumstances. She came to the hospital very drunk—I performed the operation in the middle of the night, and she was so intoxicated that the limb was taken off without her knowing it; indeed, until it was removed, she was not aware that the operation was performed! I mention this

to shew, that she could not be deemed in a favourable state for the operation; recovery, however, took place without any unfavourable symptoms. When the stump was nearly well, there was a great deal of pain and heat, and this is not uncommon. These symptoms were removed by free bleeding and the application of leeches, and she recovered remarkably well. The other patient was a strong hearty man, accustomed to hard work. Amputation was rendered necessary by a violent injury in the foot, which was entangled in some machinery, and dreadfully smashed. The amputation, as I before said, was below the knee, and he lost a considerable quantity of blood during the operation, which arose from the fulness of the blood-vessels. Next day, there was some fever, his skin dry, pulse full, tongue white, and it was found necessary to bleed him from the arm. When the stump was opened the day after the operation, it looked by no means well; in fact, in a short time it assumed a sloughy aspect; no secretion of pus took place, but a thin serous kind of fluid proceeded from it: a partial sloughing of the integument, to the extent of about an inch, took place; this was accompanied by inflammation, and the parts adjoining exhibited so much of vascular action, accompanied with dryness of tongue and other symptoms of a febrile character, that I had blood taken from the arm. This, with other remedies, relieved the local symptoms, but he then passed into a state in which I deemed it prudent to allow him a little wine and water, and he slowly recovered under the employment of these means. Though he lost so much blood, there has been some inflammatory disturbance about the stump, with pain and swelling of the glands in the groin, so that it was necessary to apply leeches. He is, however, now doing well. The general result of the operation in these two cases, agrees with others where I have operated immediately after serious injuries, and I have no hesitation in saying, that I think the practice of speedy operation is by far the best in all such occurrences.

GUY'S HOSPITAL.

Malformation of the Genitals—Hermaphroditism.

AN individual, exhibiting this unfortunate irregularity of structure was admitted into Charity ward, Sept. 30th, under the care of Dr. Bright. She was then suffering under a severe form of fever, which rendered her constantly delirious, and, in a few days, proved fatal.

On her admission*, and more especially

* Speaking of her as a patient, we adhere to the sex then assumed. She was admitted as Mary Cannon, æt. 55 or 60.

when, in order to apply a blister to her head, it was exposed and shaven, every one was struck with the coarse and masculine expression of her countenance: this and her somewhat square and muscular figure were all the observations relating to her sex that were made during life; but the post-mortem inspection disclosed the following appearances:—

A body analogous to the penis was observed immediately beneath the pubic arch; not free or pendant, but bound down towards the perineum: its length was about 2½ inches, and it terminated in a somewhat bulbous extremity, a little like the glans, but without the usual delicacy of cutaneous organization, without any perforation for the urethra, and without a prepuce. On each side of this body there was a considerable fulness of the integuments, at first view resembling the female labia, but in reality analogous to the male scrotum, as, like it, they contained each a small testis. This separation, into its two halves, of the scrotum depended on the penis being bound down in the median line, as previously described. The testes were in size like those of a boy 6 or 8 years old, and were connected with vasa deferentia, which were found pervious, and considerably enlarged towards their termination. The vesiculæ seminales were very small; the prostate gland also was remarkably small, and was covered on its sides by a pair of peculiar muscles passing from the rectum to the neck of the bladder. The urethra terminated in the perineum, about one inch from the end of the supposed penis, and half an inch further there was a blind opening, which fancy might call the rudiment of a vagina, but which was probably nothing more than an enlarged lacuna. The tunica vaginalis was continued some distance up the cord, but at the ring was quite closed. There was a very minute trace of cremaster muscle. The pelvic viscera had no female character whatever, and the formation of the pelvis itself approached to the male rather than to the female standard. The mammae were considerably developed, but would have been thought small for a healthy female. The lips and chin were clothed with a few scattered, irregular, curling hairs, not more than are often seen on aged females. The outline of the figure, in its muscular development, squareness, and largeness of limbs, &c. was decidedly more male than female. The cerebellum was natural in structure, and if it differed at all from the usual development, was rather small, but this was by no means distinct. No other peculiarities, either diseased or congenital, were observed in any part of the body.

It appears that in the former part of her life, this hybrid had assumed the dress and habits of a man; at one time working in a

brick-yard, at another period acting as a groom; then as a milkman; and afterwards she kept a green-grocer's shop. Her habits and manners were rude and bold, sometimes indicating a degree of derangement; more than once she engaged with success in pugilistic encounters; and, it is said, manifested still less equivocally male propensities. For the last 7 or 8 years she has appeared as a female, calling herself Mary Cannon; and, it is odd enough, that she first sustained her new sex at a public-house, called "The World turned upside down," where she engaged herself as "maid of all work." She was not, however, fully received by her female fellow-servants as one of them; suspicion hung about her, and care was always taken to provide for her a separate bed.—M.

WESTMINSTER HOSPITAL.

Noli me Tangere.

JANE JENKINS, æt. 44, admitted July 1, 1829, under Mr. Lynn. This was a case of *noli me tangere*, remarkable for its having been finally cured by an attack of erysipelas.

About a twelvemonth before her admission, she had a pimple on her nostril, which she scratched off; this she continued doing repeatedly, until it had spread over the whole of her nose, upper lip, and part of the cheeks. There is a deep red or claret-colour extending an inch beyond the scabs on every side. She has, during the twelvemonth, had medical treatment, consisting of ointments, lotions, &c. but without much benefit. She is a washer-woman, and says she has lived regularly; she is married, and has had twelve children; she is evidently of irritable temperament, and states that her mind is uneasy, and that she frets a good deal. Complains of great pain in her head and face. She is a fat middle-sized woman; continues menstruating, and at these periods says her face is always much worse. Bowels rather confined; tongue pale.

R Hydr. Submur. gr. ij.

Pulv. Jalapæ gr. vj. ft. pil. ij. hac nocte sumend.

R Magnes. Sulph. ʒij.

Infus. Sennæ ʒij.

Tinct. Card. ʒij. cras mane sumend.

3d.—Bowels freely opened. No alteration in the face.

R Magn. Carb. ʒj.

Pulv. Rhei gr. x.

— Aromat. gr. vj. ft. pulvis bis in die sumendus.

R Aquæ Puræ ʒvij.

Alcohol ʒj.

Mel ʒss. M. ft. lotio faciei applicanda.

12th.—She has been going on well until to-day, her face improving; she is feverish this morning.

Mist. Salin et Diaphoret.

13th.—She has an attack of erysipelas in the face, and complains of violent pains in her head and lower extremities.

C. C. temporibus ad 3x.

R Mist. Cathart. 3j. 2 dis horis.

14th.—She says she is better, but she still complains much of her head.

V. S. ad 3xvj.

R Conf. Aromat. 3ij.

Tinct. Card. 3ij.

Aq. Cinnamon 3vj. ft. mist. de quo capt. cyath. parv. ter in die.

20th.—The erysipelas is going off; her face seems improved. Mr. Lynn ordered her the following mixture:—

R Conf. Aromat. 3ij.

Infus. Cascarilla 3iv.

Tinct. Card. C. 3ij. ft. mist. et capt.

Cochl. ij. ter in die.

27th.—She has been dismissed to-day in good health, and her face quite well.

Ruptured Liver.

William Spring, æt. 11, admitted Aug. 24, under Sir A. Carlisle.

This patient was brought in last night, having been knocked over by a cart, one of the wheels of which passed over his chest across the false ribs. He complained of great pain there. A dose of house medicine was administered. This morning he complains of some little pain "across the stomach," always lies on the right side, and is very drowsy.

Towards evening he complained of pain in the abdomen; the pulse was very small. At nine o'clock he died.

On examination, eighteen hours after death, the thoracic viscera were all perfectly natural, except, here and there, adjoining the pericardium and diaphragm, some little extravasation of blood. On opening the abdomen, nearly three pints of dark blood escaped, and it was found that the liver was ruptured completely across the right lobe, about an inch and a half in depth at the deepest part, and communicating with the vena cava. The intestines appeared natural, and shewed scarcely any trace of inflammation.

Operation for Entropium.

Mary Ann Hunt, æt. 26, admitted the 9th Sept. under Mr. Guthrie. Twenty years ago she had the measles, and subse-

quently a severe inflammation of the right eye, ever since which the eyelashes have been turned in. It is four years since the left eye was affected in the same manner, in consequence of an attack of inflammation.

On the 28th May, 1829, Mr. Guthrie operated upon both eyes, but in consequence of the inflammation that supervened, he was obliged for the time to give up his efforts to benefit her.

Sept. 30th Mr. Guthrie again operated on the right eye, making an incision at the outer and inner angle, dividing the cartilage to the extent of a quarter of an inch, and snipping a longitudinal piece of the skin out of the upper lid. The eyelid was then turned up, and secured in that position by three ligatures, one through each corner, and one in the centre, which were retained on the forehead by strips of plaister: a piece of simple dressing was placed over the eye, and a compress and bandage over each.

2d Oct.—There is a little discharge, but no inflammation, and she is going on well.

3d.—The inner ligature came away to-day, but the eyelid is well turned out, and she is in every respect going on well.

5th.—The middle ligature has separated to-day.

7th.—The other ligature was cut out, and the operation has completely succeeded, the eyelid being everted, and only a little stiffness remaining.

15th.—The left eye has improved considerably since the operation on the right.

GLASGOW EYE INFIRMARY.

Artificial Pupil by Incision.

ISABEL M'GREGOR, æt. 45. The lower third of right cornea presents a dense leucoma of a crescentic shape, which completely hides the pupil. The upper half of the iris is in close contact with the internal surface of the cornea, and its fibres are evidently on the stretch. (See fig. 1.) Discerns merely light and shadow with this eye. These symptoms are the consequence of an operation for extraction of cataract performed 15 months ago, which was followed by inflammation and protrusion of the iris.

In the left eye the pupil is of an oval shape, the long diameter running obliquely from above downwards. There is a small leucoma in the site of the incision of the cornea, made in extracting the lens from this eye; and some small shreds of capsule are seen within the pupil. The vision is tolerably good.

The patient being laid on her back, Mr. Mackenzie, sitting behind her head, made with the iris-knife a quarter section of the cornea, parallel to its edge at the upper and

temporal side. Fig. 2 shows the situation and extent, by a dotted line, of the incision of the cornea. (A) marks an opening made in the iris during the incision of the cornea. This opening was accidental, but served afterwards for introducing the short blade of the scissors behind the iris, while the blunt blade passed between the iris and the cornea. On account of the closeness of the iris to the cornea, the incision of the latter could not be completed without penetrating at one point (A, fig. 2) through the iris. Maunoir's scissors were now introduced, and the probe-pointed blade was insinuated between the iris and the cornea, the sharp-pointed blade passing through the opening already made in the iris; the blades were now brought together, and a transverse snip made through the fibres of the iris, for the length of about one-fifth of an inch. The artificial pupil thus formed immediately gaped widely. A considerable discharge of dissolved vitreous humor took place, both before and after the incision of the iris. Immediately after the operation she complained a good deal of pain and heat of the eye.

Fig. 1.

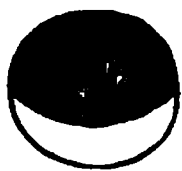


Fig. 2.

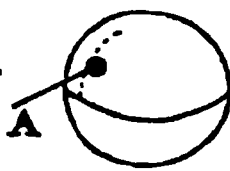


Fig. 3.



Si opus fuerit cap. haustum Anodyn. cum Tr. Opii gtt. xxx.

7th.—Eye watered much yesterday, but has ceased to do so to-day. Took the draught, and felt easier after it. Slept a little during the night. Two colocynth pills this morning.

8th.—No pain; pulse calm. A dose of calomel and jalap.

9th.—Rested ill in the night; skin rather hot; tongue red and chopped. No motion from the calomel and jalap. Had a dose of salts.

12th.—Continues tolerably easy, and opens the eye for a short time. Discerns light, but is as yet unable to fix it on any object.

13th.—Cap. ter indies Sulph. Quinæ gr. j.

19th.—Artificial pupil perfectly clear and open, of the size and shape represented in fig 3. Eye still too intolerant of light to permit her to fix it on objects.

24th.—With the assistance of a double convex lens, can see pretty distinctly. Intolerance of light much abated.

CONTRADICTION OF AN ASSERTION OF MR. HETT.

To the Editor of the London Medical Gazette.

SIR,

You will greatly oblige me by the insertion of this note in your journal.

In the number of the *Lancet* for Oct. 17th is contained a letter of Mr. Hett's, formerly a pupil of Guy's Hospital, in which he erroneously asserts the language of Mr. B. Cooper, at the anniversary dinner, to have been of so indelicate a nature as to induce a certain gentleman to leave the room. Now, sir, I, the son of the individual alluded to, take upon myself directly to contradict the assertion. That my father did leave the room is true, but from motives totally different from any which might tend to implicate the delicacy or character of Mr. Cooper as a gentleman, or lower him in the estimation of his pupils.

I do not wish to conceal my name or address. It is as follows:—

RENFORTH THOMAS SCARR, Jun.

20, Dean-Street, Southwark.

Oct. 17, Saturday Morning.

BOOKS RECEIVED FOR REVIEW.

Elements of General Anatomy. By R. D. Grainger.

A Letter to Lord Robert Seymour; with a Report of the Number of Lunatics and Idiots in England and Wales. By Sir Andrew Halliday.

Principles of Military Surgery. By John Hennen, M.D.

A Treatise on Neuralgic Diseases. By Thomas Prigden Teale.

A New Method of treating Burns and Scalds and certain Cutaneous Eruptions. By Michael Ward, M.D.

A Practical Treatise on Acute Abdominal and Pelvic Inflammation. By David Nich. Bates.

Strictures on the Economy of Health. By Z. W. Vincent.

Elements of Practical Midwifery; or, Companion to the Lying-in Room. By Charles Waller.

The Opening Address delivered at the Sheffield Medical Institution. By Arnold James Knight, M.D.

A Grammatical Introduction to the London Pharmacopœia and Preface; or, the Student's Self-Instructor. By S. F. Leach.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, OCTOBER 31, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE V.

On Inflammation ;—its general Phenomena and Divisions.

In the last lecture, gentlemen, I alluded to the fact, that the vessels in an inflamed part, when examined after death, were found so much filled with blood as to make it appear that they were actually more numerous. Now, I should have entered rather more particularly on that occasion into a consideration of the appearances which inflamed parts generally exhibit after death. Under such circumstances, we find that all the textures are preternaturally red, and that the number of blood-vessels in the part seems to have increased, while they are all turgid with blood :—at the same time interstitial deposition is observed to have taken place in the structures generally.

When we come to examine the parts, they appear firmer than natural, notwithstanding which we find that they are more easily lacerated, and more readily give way under the application of any force, so that in point of fact the effect of the inflammatory process is to diminish the natural cohesion or firmness of the part affected ; and this is found to be the general result of the disease taken in its active period. This particular result is often seen in the brain, where a very peculiar softening takes place, described by the French under the name *ramollissement*—a softening which was originally observed without any reference to the cause which produced it. This result had been noticed by various pathologists, but they attributed to other causes that softening of the brain, which accurate examination has proved to be merely a change dependent on inflammation.

You will probably inquire what is the de-
100.—v.

position, which takes place in the texture of an inflamed part, that produces the firmness to the feel which we find after death. Now in answer to this it is generally stated, that the new substance thus deposited is *lymph*—*coagulated lymph*, or as it is sometimes called, *coagulable lymph*. It is stated to be nearly the same with the fibrin of the blood, that is, with the white tough part which we see when, by washing, we have removed the red particles from the clot or crassamentum. It is said to be completely analogous to the white buffy coat which is seen on the surface of the crassamentum, when the blood is drawn from a patient labouring under inflammation.

These observations do not extend to the swelling which is situated in the neighbourhood of the part I have mentioned—that is soft and not firm. The disease in such a part is not so violent as in the immediate seat of the inflammation itself. There it produces an effusion of serous fluid in the cellular texture, and is similar to what takes place in dropsy. We have an opportunity of seeing the nature of the substance effused under inflammation, by observing what happens when the serous membranes are affected, because there the substance which, in other parts is deposited interstitially in an organ, is effused upon the surface, and is, therefore, rendered more manifest to observation. When the peritoneum is inflamed, we find that there is a kind of glue, that is, a white semi-transparent substance, deposited upon it, by which the opposed surfaces which ordinarily are free and unconnected with each other, become in fact agglutinated. The word agglutinated is used, and is an appropriate expression, for the parts seem to be connected together by a white kind of glutinous substance.

This is the state which these membranes exhibit under slight degrees of inflammation ; but when the disease is more violent, you have an opaque substance, of a somewhat fibrous appearance, deposited in a con-

considerable quantity upon their surface, and in its chemical characters it corresponds very closely to the fibrin of the blood. This is the substance to which the name of lymph is given. In cases of inflamed serous membrane you see a large quantity of this deposited upon their smooth secreting surfaces: it is at first loosely connected with the parts on which it lies, and you can scrape it off with the finger, or the handle of a knife. But within a short period blood-vessels are formed in its substance, and these seem to be an extension of the blood-vessels belonging to the surface on which the lymph is effused;—at all events, we soon find that the substance, which at first is an inorganic deposit, becomes organized. This change takes place more quickly than you might have expected;—for instance, it has been found in an inflamed intestine that the blood-vessels have been formed in the lymph deposited on its surface within a very short period from the commencement of the inflammation. When the lymph becomes organized, it assumes, more or less, the nature of the part on which it is deposited. Thus, in cases of adhesion between the various organs contained in the cavity of the abdomen, the connecting parts are assimilated in their nature to the surface of the peritoneum; they constitute a smooth, polished medium of adhesion, preternaturally uniting the parts together, and presenting a surface which you cannot distinguish from the natural state of the healthy peritoneum.

[The lecturer here exhibited a preparation, consisting of an adhesion between the surface of the liver and the peritoneal lining of the abdomen, and pointed out that the new parts corresponded in their texture with that of the peritoneum.]

We can see the same phenomenon—that is, the deposition of lymph—in inflammation of the iris. We observe either that the lymph is deposited generally through the texture of the iris, altering its colour, and changing considerably the nature and appearance of its structure, or sometimes the lymph is deposited in a distinct mass, or patch, as if a glutinous substance had been deposited on the part. We find that the matter thus poured out constitutes the bond of adhesion. It is occasionally seen between the margin of the pupil and the capsule of the crystalline lens.

Now, in inflammation affecting the texture of a part like the hand, when the lymph is deposited in the interior, the phenomena are rather more obscure, and yet there can be no doubt, if we could see the nature of the process, we should find it to be essentially the same as that just detailed—namely, that, in the first instance, lymph is effused into the structure of the part; and secondly, that the lymph becomes orga-

nized; hence we find, from examination at a more remote period, that there is a preternatural thickness and consolidation of the textures. If there is a considerable deposition in the structure of the parts that should be free and loose, they become condensed, and preternaturally adherent to each other. Thus we can explain how, in cases of violent inflammation of a part like the hand, after certain symptoms have subsided, we find the consequent effects to be consolidation and stiffness of parts that should be soft and pliant. Sometimes so much hardness is produced by this interstitial deposition into the inflamed part and its subsequent organization, that it is said to take on the appearance of scirrhus; and, indeed, we find it stated in some surgical writings, and those, too, by individuals who have been regarded as high authority, that the production of scirrhus induration is one of the consequences of inflammation. Now this is quite an erroneous view of the subject: the product of a common inflammation is merely a simple induration of the tissues in which it is seated; and you can always distinguish, even in the worst form which parts may assume from this cause, the character of the natural structure. In cases of scirrhus, the organic changes proceed until the natural structure is lost and a new one is substituted in its place. The hardness that may succeed inflammation can only resemble scirrhus in that one single character, and in no other. Common inflammation never leads to such a production as that which we properly name scirrhus.

I enumerated to you, in my last lecture, the different effects produced by the inflammatory process, which are commonly called terminations of inflammation; and I pointed out the true nature of the process,—namely, that the inflammation does not terminate with the production of these effects, but goes on, often, indeed, little diminished in violence. I told you, that you were not to understand that each species of inflammation produced exactly one of these effects, and no more. On the contrary, you often have two or more of them combined together. In a case where there is considerable suppuration of the hand, you perhaps have a large portion of the integument mortified. There may be a combination of mortification and suppuration: you may have suppuration and mortification in one part, while the rest of the inflammation is speedily subdued—that is, got rid of by resolution; or with the formation of matter and mortification in one part, you may have a considerable swelling, from the interstitial deposition of lymph, in the surrounding textures. You are further to understand, that the inflammation does not necessarily come to an end after causing these effects: the pro-

gress of inflammation, and its effects, would be more simple, and much less injurious, if that were the case; but, after suppuration has taken place in one part of the hand, unless the case be judiciously treated, and the patient take good care of himself, suppuration will occur in the neighbourhood. Thus you find that inflammation, originally produced by a slight injury of one finger, will gradually affect the whole of the palm of the hand, and then proceed to the forearm, and produce extensive mischief. The view of inflammation which I have exhibited to you from the appearances it assumes in an external part, such as the hand, has been generalised—it has been made a kind of representation of what occurs in inflammation in the body at large. No doubt it is the appearances which inflammation exhibits in the external parts of the body, from their being immediately within our observation, that have given rise to the general notion we have of the nature of the inflammatory process. Now it may be observed, that the effects and nature of this process are the same, so far as we can trace them in the internal organs of the body; but our general idea of them certainly depends upon those characters which can only be satisfactorily ascertained when the disease is situated on the exterior. Hence inflammation of all parts has been said to consist in the combination of the four circumstances I have already detailed—viz. redness, swelling, heat, and pain. But I think, in order to make the enumeration of its characters complete, there should be two other circumstances added to these: we should take into view that important result, the interstitial deposition into the substance of the part; and we should also include in our view an event which is equally important—the impaired or suspended function of the affected organ.

We ought not to include in the general notion of inflammation the occurrence of those sympathetic effects which I mentioned in my last lecture, because they do not attend invariably. The sympathetic disturbances of the sanguiferous, the nervous, the digestive, and the secreting systems, which constitute, taken together, the phenomena of inflammatory fever, are only observed when inflammation is extensive, and at the same time is very violent, or affects an important organ. You have inflammation exhibiting all the circumstances that I have mentioned in some organs of little consequence, and producing hardly any sensible effect beyond the part itself. Sympathetic constitutional disturbance, then, is not a necessary character of inflammation; but when present, it is a very important practical point for you to attend to, because it denotes either a considerable degree of inflammation, or its existence in a part of consequence. It is further important, as often

leading you to a choice of means by which the inflammation is to be treated: for example, the existence of the sympathetic constitutional disturbance would probably determine you to use *general* rather than *local* bleeding.

The question, however, what is inflammation, is not satisfactorily answered by enumerating these circumstances. The redness, swelling, heat, and pain, are the *external* signs of the disease—they are the characteristics that denote its presence; but the question still recurs, what is the change in the state of the part that produces these four signs or symptoms—what is the alteration in the capillary system of a part that gives rise to redness, swelling, heat, and pain? Now I have already had occasion to mention that this is a point which hitherto has not been clearly made out. That this circumstance is not well understood you may readily suppose, when you find that the most opposite opinions are entertained even at the present period respecting the state of circulation in the inflamed part: some imagine that it is obstructed, while others, and I think with much stronger reason, hold that it is increased. I have alluded to the opinion which supposes it to be a condition of spasm; and one circumstance which has been particularly adduced in defence of this idea is, the suspension of secretion. When, for instance, inflammation is seated in a glandular organ, it has been said that the suspension of the secretion arises from a spasm in the minute vessels of the part. Now it does not appear to me to be necessary to recur to this explanation. The ordinary office of the capillary vessels of a gland is to perform a certain secretion; but in a state of inflammation, these capillary vessels are disturbed in their action—they are thrown into an unnatural state. That it can be no spasm in the vessels I think is clear, from the effusion of coagulated lymph into the interstices: unless the vessels were sufficiently pervious, this effusion could not take place; and the same circumstance is shewn by the fulness of the veins leading from an inflamed part.

Being unable to assign a name for the process of inflammation, and for the external change that occurs in the inflamed part, that shall precisely point out what it is that produces this phenomenon, we have been obliged here, as in other cases, to name the disease symptomatically, and describe it in the same way. Inflammation is derived from the term *inflammo*, and denotes heat to exist in the inflamed part. If we have been unable hitherto to depict the precise nature of the diseased affection in inflammation, which is of such common occurrence, which we see every day, and which constitutes so large a portion of all the diseases that we actually treat, you will not be surprised that

the various attempts which have been made to construct nosologies, grounded on a knowledge of the nature of diseases, should have altogether failed.

It is necessary that the four circumstances which I have already enumerated should be combined together, in order to characterize inflammation, because taking them separately, they do not prove the existence of it at all. Redness of a part occurs in blushing; it may be produced by mechanical friction; by rubbing any part of the body; yet here there is no inflammation. You may make a part of the body hotter than usual by exposing it to the fire, but you do not produce inflammation. Again, there is swelling in anasarca, and there is pain in a variety of complaints, and yet nothing like inflammation exists. In order to characterize inflammation, you must have these four circumstances combining together, and existing at the same time in a part, but they are not essential to proving the existence of inflammation, for it may be recognized without them. These circumstances prove that inflammation has reached a certain height; but slighter degrees of the same disturbance may exist in their absence. On the other hand, if there be a very violent degree of disturbance in the capillary vessels of a part, you will have swelling, redness, heat, and pain, but without any decided interstitial deposition, and the consequent changes which it produces, which changes afford the only criterion we deem sufficient to prove the existence of inflammation.

In the serous membranes we do not find that the texture of the part is swelled under inflammation; and I believe in many instances we shall hardly perceive it to be redder than natural. The arachnoid coat of the brain is frequently the seat of inflammation, but exhibits no redness. The texture of the membrane is thickened and rendered opaque, but not red. In the case of the iris we see the inflammation, and do not doubt its existence, although we cannot discover it to be swelled, red, hot, and painful. Indeed the situation and circumstances of the part hardly admit of these changes being exhibited. In the inflammation of the cornea we may see some distention of the vessels, though we cannot discern the four circumstances that I have mentioned as characteristic of inflammation in general. In fact, considering these characteristics as indicative of inflammation, they are only of importance in reference to the affections of external organs; for when we come to consider the state of internal parts, we cannot apply this criterion to them. We cannot tell whether the liver or the lungs be swelled, red, hot, and painful. How can we tell whether the retina of the eye be in that state? So that these four circumstances

are of general, but not of universal application.

Inflammation, gentlemen, is by no means one and the same process under all circumstances; on the contrary, it varies very greatly. If you cut or scratch the finger, inflammation will be produced; sometimes without any injury, inflammation takes place near the nail, constituting whitlow; the finger may be inflamed without the rest of the limb in an attack of erysipelas;—it may be the seat of the affection called chilblain; it may be affected also with gout or rheumatism. Here are six different states that may be exhibited in one and the same part: these states are all different from each other, and yet they are all called inflammation, so that you see under this general term a considerable variety of appearances is included.

The affection in the first place differs in degree; that is, there may be more or less of inflammatory disturbance: where there is more, the progress of the case is rapid; where there is less, it proceeds slowly. This distinction is denoted generally by the terms *acute* and *chronic*. Severity of symptoms and rapidity of progress are denoted by the term, acute inflammation; mildness of symptoms and slowness of progress by the term, chronic inflammation. Now, you are not to understand from this that there are exactly two, and only two, differences of degree, and constituting what are called acute and chronic. The words merely denote in a general way the difference,—in fact, there are numerous degrees, and you often are at a loss to determine to which division you should assign a particular inflammation. There are numerous shades of transition that connect the two together. The words acute and chronic are not, in point of fact, exactly opposed to each other: the epithet *acute* denotes the *violence* of the symptoms, while the term *chronic* denotes their *duration*. Now, in acute inflammation, it is this violence of the symptoms that particularly attracts notice; in the case of chronic inflammation, it is the duration, and the consequences of the disease;—so that the terms of acute and chronic are not precisely contrasted with each other as to their meaning. Acute inflammation is called also active, violent, or phlegmonous inflammation. The term, phlegmon, is frequently employed: it is derived from the Greek term, φλεγω, and is a name given by writers to inflammation when seated in the cellular membrane and skin—to the active variety of the disease, which terminates in abscess. This is a form of inflammation that has been selected as a type of the disturbance, being one in which the inflammatory characteristics are strongly marked. The examples which we have already given to illustrate the in-

flammatory process in the hand, will shew you what is the nature of acute—active—phlegmonous inflammation. It is a violent disturbance that cannot last long; unless it is cut short by proper treatment, it will soon produce either mortification or suppuration; it is too active an affection to endure for any length of time; like fire, it soon burns itself out. Chronic inflammation is called languid, slow, or indolent; its characteristics differ materially, in several important points, from those of the acute kind. The vascular distention and disturbance are not so considerable; the redness is much less—often hardly any is perceptible, and the pain is slight. Chronic inflammation may occasionally take place in a part, and proceed some time, before the patient is aware of its existence. But although, in these respects, chronic inflammation appears to be a less serious disturbance than acute, in another point of view it is of greater consequence: there is a more extensive interstitial deposition, and consequently a greater and more serious change of structure in the affected organ.

Now, with respect to the deposition which takes place in chronic inflammation, we really are not able to speak very clearly about it. It is difficult to know the precise nature of the new matter that is formed under these circumstances. But if we take the example of the testicle, which is often the seat of this kind of change, we shall find, on cutting into it, that there is a considerable quantity of new matter, quite different from the natural structure of the part. If the testicle thus diseased be injected, the new matter is distinguished by its only partially admitting the injection. [The lecturer illustrated this point by exhibiting a preparation.] In serous membranes also we frequently see new productions formed under chronic inflammation, and they are of a very marked kind; [presenting a preparation, the lecturer said] this is an example, in which a complete adventitious membrane has been formed on the inner surface of the dura mater and the upper surface of the pia mater, in consequence of chronic inflammation in the head.

Thus you see, in acute inflammation, there is a violent disturbance of the part, which is of a temporary kind—quickly passes by, and the part recovers its natural state. In chronic inflammation the appearances are less alarming; the disturbances seem less serious and momentous; but the change of structure that is produced is much more considerable, and the results of chronic inflammation very seriously impair, or even destroy, the functions of the affected part. The danger, then, of the two appears nearly in an inverse ratio. You would suppose, when you looked at phlegmonous inflammation, that it would produce

the most disastrous kind of disturbance in the part; but when you observe the change of structure which chronic inflammation is capable of producing, you find that it is a much more uncontrollable process, and is attended with much more formidable mischief. We frequently hear and read of the expressions—the acute and chronic stages of inflammation. If we survey any particular case of inflammation, we do not find that it is one and the same process throughout: we observe, in fact, that there is a succession of phenomena; we find that inflammation commences insensibly, gradually increasing, till it acquires a certain development. It remains for a time in that state, and then gradually recedes as the part recovers a healthy condition. The whole of the circumstances embraced in this course pass under the name of inflammation, and yet the various portions of its progress differ considerably from each other. If we were to divide each inflammation into three periods, a period of formation in which the symptoms arise and proceed to a certain extent, a period of full development and a period of decline, we should find that the two first of these are nearly alike in most cases of active inflammation—there is no great difference in respect of the length of time they occupy; but the third period, or the decline—that portion of time which intervenes from the point at which the symptoms begin to lessen until the part recovers its natural state, differs much in its duration in different instances. When the inflammation is very violent—when it is allowed to pursue its progress uncontrolled—and more particularly if the circumstances that have excited it still continue to act, although the more violent symptoms may become lessened after a time, yet the state of inflammation continues for a long period before the part recovers its natural condition. The part is still inflamed, but the pain is less; the interruption of function is not so great, and this minor degree of inflammation, which continues for a long period under the circumstances that I have mentioned, is called frequently the chronic stage of inflammation; the former period, in which the symptoms are more violent, being called the acute stage.

Thus the terms acute and chronic are employed to distinguish different periods of one and the same inflammation. If inflammation is actively treated—if judicious means are employed, which arrest the inflammation suddenly, the part recovers its natural state very quickly, and you can hardly say that any chronic stage occurs. Some persons have not only employed these terms to designate the progress of one and the same inflammation, but they have frequently contended that these two periods are totally different in their nature, and produce

a different disturbance. The acute stage is regarded as the result of the increased action in the part, and the chronic stage as the result of the weakness, or debility, of the part; and they have founded on this alleged difference a corresponding difference in point of treatment, for they have contended that the atonic state requires tonic and stimulant treatment.

I consider that this view is erroneous. Without undertaking to say that there is no difference between acute and chronic inflammation in general, I have no hesitation in affirming that such difference does not exist between the acute and chronic stages of one and the same inflammation. I admit that there is a difference of *degree*, and that the chronic is a period of less violent disturbance, but still it is the same *kind* of disturbance; and in proof of this, we find that the acute form may pass into the chronic, and the chronic may relapse into the acute. When inflammation of the eye has arrived at the chronic stage, if the person be imprudent, or from various other causes, he may have all the phenomena of acute inflammation reproduced; and when you find that within a short period one stage can pass into another, and *vice versa*, you cannot admit the notion that these two stages are opposite to each other in their nature, and in the treatment they require.

Again, sometimes we hear of *active* and *passive* inflammation, which is an expression that to me conveys no clear distinction, and I for one deem it erroneous. I mentioned to you generally the idea that inflammation was increased action, and consequently passive inflammation conveys a contradiction in terms. This notion of passive inflammation is founded on the same erroneous view that I have just mentioned respecting the chronic stage, namely, that there is a kind of inflammation depending on a debility of the part. Admitting that acute inflammation depends on augmented action, it has been contended that chronic must depend on the contrary. I know of no such state myself. It is true, inflammation will differ very much, particularly in respect of treatment, as it occurs in weak or strong subjects; but the difference of the general state of the subject in which inflammation occurs is another point, from a difference in the state of the part itself. What I mean to contend for is, that no inflammation derives its origin from a state of weakness in the part itself; and although the state of weakness in the constitution generally may be *remotely* a cause of many inflammations, yet when the disturbance occurs, it is from an increased action of the vessels of the part.

We also hear of the arteries and veins as being in a state of *congestion*, in speaking of the different conditions in which an inflamed part is found. I acknowledge

this conveys no correct idea to my mind. The minute vessels of a part—the capillary system, in which inflammation seems essentially to reside, is intermixed in its ultimate ramifications with the textures constituting the organ, so that we cannot distinguish one from the other. Our means of distinguishing this order of vessels do not go very far;—after we have got beyond a certain point, there is no distinction that we can make between arteries and veins, and, therefore, we are unable, in reference to the living state of a part, to see their precise condition.

Inflammation differs essentially in the effects it is capable of producing. When the causes of disease are applied to internal parts, we sometimes observe derangement in a function without our knowing exactly if there be a change in the condition of the part, and we call this state of disorder, *irritation*. This, probably, is the commencement of that disturbance which in a more advanced condition would be inflammation. We sometimes see that there is merely distention in the vessels of a part, which is called *congestion*; sometimes the state of the vessels is evinced by a discharge of blood;—*hæmorrhage* occurs, and this may take place either from a free surface, as of a mucous membrane, or it may take place in the interior or substance of an organ. Again, we have the effusion of serum, the effusion of lymph, the formation of pus—*ulceration*: these are the varieties in point of fact which characterize different degrees of inflammation. We have not, perhaps, any direct data for saying that the kind of disturbance in the part which we call irritation, or disorder, is *actually* the commencement of inflammation, we only say it is *probable*. In fact, the word irritation, if employed in contradistinction to inflammation, does not denote any definite state of a part that I am acquainted with. Generally speaking, the word *irritation* is rather used to denote those symptoms which arise from affections of the nervous system; but we also use it in another sense—for instance, we speak of the irritated state of the stomach or alimentary canal. I think we ought to be able, by an accurate analysis, to resolve those conditions in which the term irritation is applied into something like inflammation; but if it is used in all those states in which derangement of the nervous system is involved, we shall then find that irritation cannot well be distinguished from inflammation. Now the various effects I have just mentioned, in point of fact, are generally ascribed to a difference in the degree of inflammation—but not entirely so. *Hæmorrhage* is the result of increased action, which chiefly shews itself in the mucous membranes: hæmorrhage into the substance of a part is rather an uncommon occurrence; it takes place,

however, in the affections of some internal organs. I fancy an instance was hardly ever known of abscess forming in the spleen; and it is very rare to see it in the kidney. Abscess in the liver is uncommon in this climate, though it is not so in some others. Thus there are peculiarities in the effect produced by inflammation that are not altogether referable to a difference of degree.

Inflammation, then, differs very much in its nature; the difference being, in a great measure, referable to the cause that has produced the disease. I have already mentioned the difference between common and specific inflammation, which must be referred to this head, and I need not particularly advert to the point again. I will only observe, that in specific inflammation we generally find there is a tendency to some particular kind of change in each case: in syphilis, for instance, we find that inflammation generally terminates in ulceration; in scrofula, the formation of abscess, and the deposition of tubercles in various organs, are the most ordinary termination. In common cases, there is a general, regular, and uniform progress of inflammation, from the first commencement to the termination; in specific inflammation, however, there are frequent irregularities in its progress. Sometimes the phenomenon that I have already mentioned—the sudden disappearance (called by the French *delitescence*) is observed. It is by no means uncommon in gout and rheumatism to see inflammation suddenly stop in one part, and then as suddenly appear in another; and this particular occurrence has been called *metastasis*, which means transference of disease. The idea that has been entertained of metastasis is, that the diseased matter which was seated in one organ was transfused or removed to another. It is an explanation founded on the old ideas of the humeral pathology. Now without entering into any such mechanical view of the subject of metastasis, I may mention that it frequently happens in gouty and rheumatic diseases, that they depart from the part in which they are seated, and other distant parts become as suddenly affected. That is all we can detect in metastasis—we see the removal of the affection from one part, and its increase in another. An individual has a swelling on some external part of the body, and we have the swelling suddenly removed, and perhaps inflammation comes on in the lungs and heart; but how it happens, we cannot tell.

These are some of the material points in which inflammations differ from each other; there are some points of minor consequence, which it is only necessary to allude to generally. Inflammation differs according to the temperament of the individual in whom it occurs; it also differs according to the age,

the sex, and the mode of life. Inflammations are also influenced by the state of climate and atmosphere in which the individual lives; and hence we find, under particular circumstances, that certain kinds of inflammation will take place in a great number of persons; thus, more particularly in hospitals, you will have a great number of cases of erysipelas.

I shall proceed with the *Causes of Inflammation* at our next meeting.

DUPLEX BOYS.

To the Editor of the London Medical Gazette.

SIR,

YOUR publication of an interesting case of a living double child, related by Mr. Borland, in a late number, induces me to believe that a more detailed account of the joined Siamese children than has yet appeared in this country, may prove acceptable to your readers. The accompanying statement was drawn up by Dr. Warren, of Boston, and is addressed to a respectable gentleman in that city. It has been transmitted to a friend of mine in London, who has kindly furnished me with it. The public will, before long, have an opportunity of seeing these boys, as the gentlemen who have had them conveyed to America propose that they shall visit London and Paris.

I am, Sir,

Your obedient servant,

JOHN ASHBURNER.

5, Wimpole-Street,
18th Oct. 1829.

Dear Sir,—In compliance with your request, as well as in obedience to what I consider to be a professional duty, I undertake to give some account of the Siamese boys, and particularly of the medium by which they are united together.

The boys are supposed to be about 18 years old. They are of moderate stature, though not so tall as boys of that age in this country. They have the Chinese complexion and physiognomy. The forehead is more elevated and less broad than that of the Chinese, owing to malformation. They much resemble each other; yet not so much but that, upon a little observation, various points of dissimilarity may be noticed.

The substance by which they are connected is a mass two inches long at its upper edge, and about five at the lower. Its breadth from above downwards may be four inches; and its thickness in a horizontal direction two inches. Of course it is not a rounded cord, but thicker in the perpendicular than in the horizontal direction. At its lower edge is perceived a single umbilicus, through which passed a single umbilical cord, to nourish both children in the foetal state. Placing my hand on this substance, which I will denominate the cord, I was surprised to find it extremely hard. On further examination, this hardness was found to exist at the upper part of the cord only; and to be prolonged into the breast of each boy. Tracing it upwards, I found it to be constituted by a prolongation of the *ensiform cartilage of the sternum*, or extremity of the breast-bone. The breadth of this cartilage is an inch and a half; its thickness may be about the eighth of an inch. The cartilages proceeding from each sternum meet at an angle, and then seem to be connected by ligament, so as to form a joint. This joint has a motion upwards and downwards, and also a lateral motion; the latter operating in such way, that when the boys turn in either direction the edges of the cartilage are found to open and shut. The lower face of this cartilage is concave; and under it is felt a rounded cord, which may be the remains of the umbilical cord. Besides this there is nothing remarkable felt in the connecting substance. I could distinguish no pulsating vessel.

The whole of this cord is covered by the skin. It is remarkably strong, and has no great sensibility; for they allow themselves to be pulled by a rope fastened to it, without exhibiting uneasiness. On ship-board, one of them sometimes climbed on the capstan of the vessel, the other following as well as he could, without complaining.

When I first visited the boys, I expected to see them pull on this cord in different directions, as their attention was attracted by different objects. I soon perceived that this did not happen. The slightest impulse of one to move in any direction, is immediately followed by the other; so that they would appear to be influenced by the same wish. This harmony in their movements is not the result of a volition, excited at the

same moment. It is a habit, formed by necessity. At an early period of life, it is probable they sometimes differed. At present this is so rarely the case, that the gentlemen who brought them have noticed only a single instance. Having been accustomed to use the cold bath, one of them wished it when the weather was cool; to which the other objected. They were soon reconciled by the interference of the commander of the ship. They never hold a consultation as to their movements. In truth, I have never seen them speak to each other, although they converse constantly with a Siamese lad, who is their companion. They always face in one direction, standing nearly side by side; and are not able, without inconvenience, to face in the opposite direction; so that one is always at the right, the other at the left. Although not placed exactly in a parallel line, they are able to run and leap with surprising activity. On some occasions, a gentleman, in sport, pursued them round the ship, when they came suddenly to the hatchway, which had been inadvertently left open. The least check would have thrown them down the hatchway, and probably killed one or both: but they leapt over it without difficulty.

They are quite cheerful; appear intelligent; attending to whatever is presented to them, and readily acknowledging any civility. As a proof of their intelligence, it is stated that, in a few days, they learned to play at drafts well enough to become antagonists of those who had long been versed in the game.

The connexion between these boys might present an opportunity for some interesting observations in regard to physiology and pathology. There is, no doubt, a network of blood-vessels and some minute nerves passing from one to the other. How far these parts are capable of transmitting the action of medicines and of diseases, and especially of what particular medicines and what diseases, are points well worthy of investigation. Captain Coffin informed me they had never taken medicine since they had been under his care. Once they were ill from eating too heartily, but were relieved by the efforts of nature. He thinks that any indisposition of one extends to the other; that they are inclined to sleep at the same time, eat about the same quan-

tity, and perform other acts with great similarity. Both he and Mr. Hunter, the gentleman who united with him in bringing them here, are of opinion that touching one of them when they are asleep, awakens both.

The pulsations of the heart are exactly alike in both boys. I counted seventy-three pulsations in a minute, while they were sitting; counting first in one boy, then in the other. I then placed my fingers on an arm of each boy, and found the pulsations take place exactly together. One of them stooping suddenly to look at my watch, his pulse became much quicker than that of the other; but after he had returned to his former posture, in about a quarter of a minute, his pulse was precisely like that of the other boy. This happened repeatedly. Their respirations are, of consequence, simultaneous.

This harmony of action in primary functions shews a reciprocal influence, which may lead to curious observations and important deductions. Whether it will be in my power to obtain any further information in regard to them, is uncertain. If not, some one else can better accomplish the task.

Let me add, that there is nothing unpleasant in the aspect of these boys. On the contrary, they must be viewed as presenting one of the most interesting objects of natural history which have ever been known to scientific men.

You are at liberty to employ the above statement in such way as you think likely to be useful.

I have the honour to be, yours, &c.

JOHN C. WARREN.

[There can be no doubt, as it appears to us, but that these individuals might be separated by a very simple operation, and almost with the certainty of giving to each the advantage of a separate existence.—E. G.]

MODE OF SWALLOWING POISON WITH IMPUNITY.

To the Editor of the London Medical Gazette.

SIR,

I BELIEVE no one has suggested any plan by which a person could swallow arsenic and Prussic acid without their producing any ill effects, in the manner

which M. Chabert is reported to have done. That M. Chabert may have discovered an effectual antidote to one poison is possible; but that he should discover antidotes to poisons of all descriptions, as he represents, is not to be credited. I believe that in the following mode a dexterous man might swallow poison without being injured by it.

Let an elastic gum tube be procured, as long as the œsophagus, and as broad as it will admit, without impeding respiration by its pressure upon the trachea. To the end of this attach a pig's bladder, and pass the bladder into the stomach with the tube attached to it. The upper part of the tube will of course occupy the upper part of the pharynx, and it may be fixed in its situation by two thin pieces of silk, or silver wire, attached to it, and carefully wound round the last dens molaris. As the œsophagus, when undistended, lies in a collapsed state, it will be understood that it will leave no space between the tube and its inner membrane, particularly if the tube is a little expanded at its upper extremity, corresponding to the shape of the pharynx. When a person attempts to swallow with the tube fixed in this situation, the pharynx will contract closely upon it, and prevent any portion of the substance swallowed from passing between the sides of the instrument and its inner membrane. The substance swallowed will of course find its way into the receptacle provided for it within his stomach by its own gravity. There have been instances of people who contrived to pass knives a considerable distance down the œsophagus; and if this be practicable, surely a bladder might be passed with a tube attached to it. I am much astonished that no one has suspected M. Chabert of swallowing poison in this manner. It appears evident that the poison passes down his œsophagus; but whether it passes through a tube contained within it into the bladder or stomach of some animal, or immediately into his own stomach, I leave your readers to judge. Perhaps this communication may induce some gentleman to pass a probang (if M. Chabert will allow him) with a view of endeavouring to discover it.—I am, Sir,

Your humble servant,

R. S. RICHARDSON,

Bedford-Place, Oct. 20th, 1829.

DETAILED NOTES

OF

BARON HEURTELOUP'S FIRST PUBLIC OPERATION OF LITHOTRITY.

From the Manuscript of his Work.

(Communicated by Mr. RUTHERFORD ALCOCK.)

The Patient 30 years of age—voluminous stone—Catarrh of the bladder—the Evidur instrument employed to seize and break the stone, the three-branch instrument used to extract the fragments—complete cure of the patient—no fever either during or between the “seances” for the operation.

JEAN JOUVEAUX, native of Villebout, department of Loir and Cher, of good constitution and 30 years of age, of bilious and sanguineous temperament, day labourer, experienced, in 1821, all the symptoms which denote stone in the bladder; a small calculus passed by the urethra a year after the first symptoms were observed. He suffered for five years, and determined on the 6th of Sept. 1826, on entering the Hotel Dieu.

Baron Dupuytren, chief surgeon of the Hotel Dieu, confided this patient to my care, that I might *publicly* perform the operation of lithotrity.

On performing a “methodical catheterism*,” I found the bladder about three inches wide, not very large from before backwards, and deep under the neck. The existence of a stone of considerable size was ascertained, moveable, rolling; and the bladder, notwithstanding rather a severe catarrh, was only of moderate sensibility. The urine was loaded with a slimy yellow mucus, adherent to the bottom of the *pot de chambre*, and in sufficient quantity to form a sediment in a large vessel, where the urine was deposited, the depth of a finger.

Notwithstanding this catarrh, I decided on operating, judging that it was rather a symptom of the existence of a stone, than the result of a serious disease of the bladder. The easy distention of this organ assured me that the

whole substance of the bladder did not participate in the disease, and that the mucous membrane alone was affected.

I decided then upon performing the operation, and on account of the size of the calculus, I began first with my instruments for excavating it.

The patient being placed on my operating bed, in a convenient posture, with the feet in the sandals, an injection of water was first made, to dilate the bladder; the organ being distended, the “pince à forceps” was introduced, opened, and drawn gently towards the neck of the bladder; the “pince servante*,” introduced within the “pince à forceps,” enabled me to ascertain that the stone was beyond the open branches of the “pince à forceps;” I therefore seized it with the “pince servante,” and drew it within the branches of the former. In this manner the stone was fixed without any movement of the instrument, and firmly seized and retained by the four branches of the “pince à forceps,” and then submitted to the action of that part of the instrument destined for its destruction†.

The forceps retaining the stone, and being fixed by the vice attached to the bed on which I operate, I now made a hole in the stone, two-thirds of its thickness, with the perforator. On removing the perforator, the evidur was introduced, and I excavated the stone until the walls fell in fragments with a slight noise.

Injections of warm water brought out immediately a considerable quantity of thick white pulpy matter, which coming out from the cavity of the stone

* The “pince servante” forms a part of the “evidur à forceps,” and is a delicate three-branch instrument within the principal, or mistress forceps, as Baron Heurteloup sometimes calls them; and, introduced through the cylinder, seizes the stone, and places it conveniently within the larger branches.—J. R. A.

† The four branches of the “pince à forceps” are moveable separately, so that they may each, one after the other, be drawn down firmly upon the stone, which, supported at four points, can no longer move, and is thus adapted in the best possible manner to be acted upon by the excavating instrument, which acts within the branches, and of course within the stone. The branches of the “perce pierre” of MM. Leroy and Civiale, being all attached to the same tube, and dependent upon each other, cannot very perfectly grasp a large stone; for the curved points which form the extremities of these branches do not all three press equally upon the stone, and, consequently, cannot hold it sufficiently firm to resist the action of the evidur. It may frequently hold a stone well enough to allow a perforation to be made with a simple drill head; but even with this it is often liable to slip.—J. R. A.

* It has been already explained in a former number (present vol. p. 1) in what Baron Heurteloup’s “methodical catheterism” consists.—J. R. A.

in flakes, gives evident proof in favour of the system I have adopted for the destruction of foreign bodies in the bladder: for to effect this, I only required to seize the stone *once*, and submit it *once* to the action of the instruments destined to break it up. The patient also was perfectly free from pain, and during the action of the instrument publicly expressed this, saying he was so easy that he could almost go to sleep*.

Immediately after the first attack, Jean Jouveaux felt relieved, and no longer experienced those painful sensations produced by the stone while entire. Its walls now broken, and its centre excavated, presented no longer a compact body, striking the neck of the bladder in walking. Lighter, and less liable to roll, these fragments ceased to give pain to the patient. Hence this first sitting was followed by great relief, and he felt better than he had been for a long time. No fever supervened, and the urine was charged, during some days, with a considerable quantity of powder and small fragments, which were observed to be immersed in the catarrhal matter, which, during the first two days, was as abundant as before; after that it gradually diminished until the sixth day, when I thought it advisable to relieve the patient of the shell fragments which still remained in the bladder.

The patient placed in the same position as in the first sitting, the bladder was injected, and the three-branch instrument, "a foret simple†," was introduced with ease, and several fragments were submitted to its action, either by the rotatory motion of the

drill effected by the how, or by pressing the head against the three branches. In this sitting the instrument was opened five times, and a fragment seized each time the branches were closed. Powder and fragments were immediately voided by the patient, and he continued doing so in the three following days. The catarrh evidently diminished.

In six other sittings, some of the remaining fragments were reduced to powder and very small morsels, and, after each time, the catarrh progressively improved: first as to its quantity, and afterwards in quality; for, from the discharge being mucous and purulent, it became simply mucous. There was nothing remarkable in these last sittings, except that the patient had a little difficulty in ejecting some of the fragments, but they were easily drawn forward to the meatus urinarius by properly adapted forceps, and there broken without any pain. No febrile symptoms occurred, to indicate any irritation of the organ, during the whole of his treatment. The patient had a quarter of his usual diet taken off, and was allowed to walk about the hospital. He was ordered a warm bath a few times after the application of the instruments, and recommended to drink freely of barley-water, to facilitate the expulsion of the fragments.

At the end of September he was sounded by Baron Dupuytren, M. Breschet, and M. Sanson, surgeons to the Hotel Dieu, and no vestige of stone was found. The patient left the hospital, anxious to join his family, and without allowing me to introduce the instrument, in order to be completely convinced of his perfect cure.

Some time after, I saw this patient, and having questioned him as to the state of his health, I learned that the jet of urine was not uniform, and, though he suffered no pain in voiding it, I thought it desirable to introduce an instrument. After some search, I found a fragment of a few lines in diameter, which was seized, broken, and ejected immediately. A second exploration with the instrument convinced me of the complete cure of the patient.

Reflections—It is now three years since Jean Jouveaux was relieved of his stone, and his health has continued good ever since; no symptom or sensation has been experienced, to throw any doubt on the completeness of

* I only mention this circumstance of the patient having thus publicly expressed his perfect tranquillity during the excavation of the stone, because his expression proves more than any argument how little pain it causes. It may, however, be easily conceived that in some patients no painful sensation should be experienced, since, during the operation, the instrument is immovable; the action of the mandrin is effected within the forceps, which retains the stone; it is destroyed from within outwards; and, consequently, the whole action takes place, until it is broken up in fragments, within the stone; and, finally, the whole takes place in the water with which the bladder is full, and in the middle of which that part of the instrument retaining the stone is of course placed. Every part of the canal and bladder being thus protected, the patient ought to have no pain, except what may arise from the presence of a sound in the bladder, and this in some patients, as experience daily proves, causes scarcely any painful sensation.—J. R. A.

† M. Heurteoup had not at that time his "brise coque," which would have terminated the operation much more rapidly.—J. R. A.

his cure. This operation was publicly performed, before Baron Dupuytren, Professor Breschet, and Dr. Sanson, Surgeons of the Hotel Dieu, a great number of medical practitioners, and the pupils that attend this hospital. This is the first *public* operation of lithotripsy performed in France*.

ANALYSES OF BRITISH MEDICAL JOURNALS.

LONDON MEDICAL AND PHYSICAL JOURNAL.

September 1829.

On the precise Seat of the Variolous Pustule. By Mr. GEORGE OAKLEY HEMING, Surgeon, Member of the Royal College of Surgeons.

MR. HEMING has paid considerable attention to the minute anatomy of the local affection in small pox and varicella, and has been led to believe that these two diseases are developed in different structures; viz. the former in the sebaceous glands and mucous follicles, while the latter is merely subcuticular.

"It may be observed," says he, "that the variolous pustule is confined to the skin and mucous membranes. After much diligent search, I have never been able to detect any thing at all resembling it in the serous membranes. I do not mean to say that there is, in no case of variola, inflammation of a serous membrane, but that I have not been able to detect any appearance of variolous pustule, or difference from that of common inflammation. Then the circular, flat, and indented form of the variolous pustule differs widely from the hemispherical form of the vesicle of varicella: it is obvious, too, from the hardness felt on an early examination, that deeper-seated parts are affected in the former than in the latter disease."

At first sight it may appear an objection to this doctrine that the variolous pustule occurs all over the body, and that several have doubted or denied the existence of the sebaceous glands over the entire surface. Beclard, however,

distinctly affirms their existence, and the late Mr. Chevalier has demonstrated their presence in every part of the cutaneous texture.

"The sebaceous glands, as is well known, are small bodies, whose office is to secrete a greasy matter, which is poured forth by their excretory ducts, and distributed over the skin; and into each of these ducts the cuticle dips. This organization cannot be discerned in the healthy state of the sebaceous glands; but, when they are diseased, it may sometimes be seen even without a lens. They are very prone to diseases, of which one form is called *acne*. It was the resemblance that this diseased state of the sebaceous glands bears to the little tumors found in the early stage of small-pox, and the striking similitude to a small-pox pustule at a more advanced period, when an herpetic eruption about the chin extends over an enlarged sebaceous gland, conjoined to other circumstances, which first led me to suppose that the sebaceous glands and mucous follicles were the parts affected by variola.

"Sir A. Cooper remarks, that some tumors arise from an enlargement of the sebaceous cysts, in consequence of their orifices being obstructed; and he observes, that 'within the cyst there is a lining of cuticle which adheres to its interior, and several desquamations of the same substance are found within the first lining.' I am now attending a young woman who has a disease of these glands, and the orifices are so much enlarged that I can pass into them a bristle. I applied a blister, and, by this means removing the cuticle, had a drawing taken of the part, in which this fact is illustrated. The sebaceous glands and mucous follicles bear the strictest analogy to each other, both in their structure and functions, and consequently are apt to be affected by the same diseases.

"I now proceed to give an account of the appearances of the perfect variolous pustule: I would first observe, most particularly, that, although the indentation of the pustule of small-pox has generally been considered by medical writers as one among many other circumstances by which we may be enabled to distinguish it from chicken-pox, it appears to me that, not being acquainted with the cause of this very curious circumstance, they have not at-

* The instrument grasping the stone, indicated on the graduated scale made for the purpose of measurement, *fifteen lines*; and the quantity of detritus expelled was sufficient to convince me that the calculus was of that size.

tached to it the importance which it seems to demand. This indentation in the pustule can only depend upon the structure of the part affected; it is the natural formation of the cuticle at that part which produces the depression in its centre.

“ Dr. Armstrong says, ‘ I have never seen the central depression absent in small-pox, and, what is remarkable, I have never seen it present in chicken-pox.’ My own practice confirms this observation; and I think that most medical men must have observed the uniformity of the central depression in small-pox. The inference I would draw is, that small-pox at all times attacks the same structure.

“ At the earliest stages of the eruption of small-pox, it is generally first seen in the hands and face, where small red spots indicate the inflamed state of the cutis. On these spots a small, round, hard tumor may be perceived by the touch, before it becomes visible. In twenty-four hours it is still more distinct. It gradually changes its form until the third or fourth day, when it is perfectly circular, with a flattened top, in the centre of which an indentation may be perceived, resembling, it has been remarked, ‘ the impression made in the skin with the head of a large pin.’ The vesicle is then about the eighth part of an inch in diameter; it is of a cellular structure, and filled with lymph somewhat turbid, and finally purulent. By the fifth or sixth day, its size has augmented to twice its former diameter. The central depression is commonly evident on the second or third day in some of the pocks, where they are numerous. Dr. Munro, in his *Observations on the Small Pox*, remarks that ‘ the central clear part of the pimple is evidently depressed on the fourth or fifth day: this depression is not to be perceived in all the pimples in the same light; but, by turning the body, it can be seen in those vesicular pimples in which it had not been previously perceptible. This fact is generally overlooked, and has often led to the denial of the existence of the central depression when it was present.’

“ There may be cases in which the central depression is not perceived without much difficulty; but, if the pustule be carefully examined by a microscope, and in a proper light, it will be discovered. It is most manifest when the

internal fluid is clear, and is essentially different from the depression in other eruptions, which exist only after the apex is encrusted. As the disease advances, a red ring shows itself round the circumference of the pustule, and becomes wider as it increases in size. There is a remarkable appearance of the pustules on the sixth or seventh day, which was pointed out to me by Dr. Marshall Hall: there is an external ring of rose colour, in which is another ring of white, evidently rendered so by the colour of the contained fluid; within this is a third ring, which is red, and has an appearance as if the surface of the pustule was in contact with the flesh beneath; and in the middle of this there is a portion which again looks white, but is dull and cloudy. These appearances I have constantly observed about the sixth or seventh day. After the seventh or eighth day, the pustule loses its indented character, and becomes nearly spherical. If it be opened, it will be found to contain pus; and not only the small sebaceous gland, which was at first merely inflamed and enlarged, has become disorganized, but all these small glands within the circumference of the pustule have partaken of this disorganization, and a slough is formed nearly of the size of the base of the pustule. A portion of coagulable lymph is thrown out around the slough; and this I am inclined to think is what Mr. Cruikshank supposes to be a membrane situated between the rete mucosum and cutis, and which he has called the membrane of small-pox.

“ Mr. Cruikshank describes this vascular membrane as situated between the rete mucosum and cutis, and which he had injected in the skin of persons who had died of the small-pox. During the summer months he macerated in water pieces of small-pox skin, which had been kept for some time in spirits, and he says, ‘ the cuticle and rete mucosum were turned down, and, upon the 8th or 9th day, I found I could separate a vascular membrane from the cutis.’ There is little doubt but this was the vascular network described by Bichat, which Mr. Cruikshank had injected, and, in consequence of the effusion of lymph which I have previously described, he was enabled to separate it in the form of a membrane.

“ From the back of a patient who died of the small-pox I removed a por-

tion of skin covered with pustules, which I macerated in water eight or ten days. I succeeded in removing the cuticle from the pustules; these still retaining their form, and being covered by another membrane. But, in the present doubtful state of our knowledge as to the existence of the rete mucosum in the white races, I found some difficulty in deciding whether this was the rete mucosum, or only a layer of coagulable lymph effused at an early period of the formation of the pustule, and subsequently raised with the cuticle by the pus contained in the pustule. Dr. Armstrong has this preparation.

“Mr. Cruikshank found that in the centre of the pustule of small-pox there was a white substance, which he could not inject; and this Mr. Hunter said was a slough formed by the varicellous inflammation. He thought it was always to be found in this disease, and that it was a circumstance by which it might be distinguished. In most cases it does exist, but I believe there are some exceptions. Upon this subject, however, I cannot speak decidedly, as I have never had an opportunity of minutely examining that kind of pustule. The cases to which I allude are those of modified small-pox, particularly as occurring after vaccination. Here we have an inflammation of a more moderate kind, and partaking more of the adhesive character. Lymph is poured out, which gives a peculiar hardness to the pustule, and, as the eruption subsides, a small tubercle is left. The lymph, however, is again absorbed, and the hardness and swelling are gradually removed. If these pustules were examined at any period, I do not think the slough would be found.”

Cases of Hysteritis Puerperalis. By JAMES PAXTON, Member of the Royal College of Surgeons in London.

This communication consists of two cases of inflammation of the uterus. The first was treated with stimulants, and afforded an opportunity of ascertaining, by post mortem examination, that the uterus was five inches in diameter, and internally of a deep crimson hue, the cervix being gangrenous. The second case was treated by means of depletion, and the patient recovered. The inferences drawn by the author are as follow:—

“1st. That copious depletion is the most powerful means of subduing inflammatory action of the uterus.

“2d. That uterine discharges have no effect in relieving that organ, when suffering under inflammation.

“3d. That neither the faintness experienced by the patient, nor even uterine hæmorrhage, or weakness of the pulse, should have any weight on the mind of the practitioner, so as to prevent his carrying local or general blood-letting to its requisite extent: for if there is fever, with constant uterine and general pain, this is the true criterion for forming a judgment of the propriety of the measure, and not any other consideration whatever.”

The conclusion, from a former Number, of Dr. Ballingall's last clinical lecture follows. We gave those parts which appeared most interesting at the time this lecture was originally published.

Case of Lithotomy; the Stone situated behind the Os Pubis. By T. HODSON, Esq. Surgeon.

Mr. Hodson thus describes the operation:—

“Upon cutting into the bladder, and introducing the fore-finger of my left hand upon the cutting gorget, I perceived the stone behind the os pubis, and so situated that it would have been impossible to have taken hold of it with the straight forceps. I therefore immediately introduced the curved forceps upon the blunt gorget, and readily got hold of the stone; but, upon attempting to bring it down, the forceps slipped and let go their hold. This happened four or five times before I could succeed in bringing it down, when it was easily extracted, and the patient, who was about forty years of age, recovered.

“The stone weighed three ounces, and was shaped like a heart, and, being situated behind the os pubis, with its apex downwards, the difficulty alluded to was readily explained; and, although the operation (as I have already observed) was finished in the course of a few minutes, it might, I conceive, have proved very tedious and embarrassing, in consequence of the stone being wedged in the arch of the pubis.”

Experiments and Observations on Mesmerism. By RICHARD CHENEVIX, Esq. F.R. and E.S., M.R.I.A., &c. (4th Article.)

The fourth article, but not the last on this subject. Mr. Chenevix has fortified himself, in the paper before us, with documents from several practitioners in London: Mr. Brodie, Dr. Prout, Dr. Holland, Mr. Earle, &c. Not one of these gentlemen, however, express any opinion that can by possibility be construed in favour of mesmerism.

October.

Historical Sketch of Lithotrity. By W. B. COSTELLO, Esq. late assistant to the inventor, Dr. CIVIALE.

Any one interested in the progressive improvements made in the art of removing calculi from the bladder, will find them well detailed in this paper. What the profession want, however, is not so much to know how badly their forefathers did these things, as to be taught the best mode in which they may be done now.

Case of Sarcocoele, in which, after the removal of one Testicle, the disease attacked the other, and was cured by the use of Bougies. By JOHN NORTH, Surgeon, F.L.S.

This case is interesting: we shall therefore give it full.

In many cases it may be difficult to determine whether the removal of disease is to be attributed to the efficacy of the treatment which is employed, or to some spontaneous operation of nature. I think, however, it may fairly be inferred that the successful termination of the second attack, in the following case, was owing to the means which were adopted.

A gentleman, 26 years of age, who had previously enjoyed uninterrupted good health, felt for some weeks a slight tenderness of the left testicle. He attributed it to cold or fatigue, or some accidental and trifling cause, and paid little or no attention to it. For two months the pain of the testicle continued to increase, but as yet it was not very severe. The part was slightly enlarged. In this state he applied to me. I could not, after the strictest examination, ascertain any probable cause

upon which the local affection might be dependent. He had not for many years had gonorrhœa, and had never any symptoms of stricture. He was directed to remain as quiet as possible, and to confine himself to a mild regimen. Leeches were applied to the part, and afterwards fomentations. Occasional purgatives were given, and small doses of calomel, combined with extract of hemlock, twice a day. A large-sized bougie was also introduced into the bladder, to determine that there was no obstruction in the urethra.

Under this treatment the pain almost entirely ceased for a few days. The testicle, however, continued to enlarge, and it had now an irregular feel. Under the direction of two eminent surgeons, various means, both general and local, were had recourse to, but without avail. The pain and swelling of the part slowly increased for three or four months, and as the health of the patient was visibly declining from constant suffering, and every mode of treatment had been adopted from which relief could be rationally expected, it was deemed expedient to remove the testicle. It was now at least six times the natural size, and exquisitely painful. The colour of the scrotum was darker than natural. The patient cheerfully consented to the proposal, and the operation was performed.

Upon examining the testicle after its removal, it was found to be completely altered in structure. It presented the appearance of a scrofulous mass. In some parts it was very firm, in others comparatively soft. There was a very small quantity of fluid in the tunica vaginalis.

After the operation the patient speedily rallied, and in the course of a few weeks he was capable of pursuing his accustomed avocations. His health and spirits were completely restored.

About four months from this period he perceived, in walking or riding, a very trifling uneasiness in the right testicle, which would not probably have attracted his attention, had he not been taught by his former experience the necessity of timely precaution. He came to town immediately, in a state of much anxiety. I examined the part attentively, and found that it was tender to the touch, and rather harder than natural. It was nearly double the ordinary size; but it was at first doubtful

whether this circumstance was to be attributed to disease, as, after the removal of one testicle, the other frequently becomes much enlarged. Mr. Heaviside, who had before seen the patient, was again consulted.

It would be useless to detail minutely the different local and general remedies that were employed. It was evident that the disease was gradually gaining ground, and that it was pursuing the same course as the former. A slight and very temporary amendment, indeed, was perceived while he was under the influence of a mild course of mercury; at which time, hemlock poultices were also applied to the part.

Mr. Guthrie's opinion was now taken. The testicle was about four times the natural size, and very painful on the slightest pressure; the general health of the patient bad; his mind, of course, anxious and dispirited. Mr. Guthrie recommended the continuance of decoction of sarsaparilla and the compound calomel pill, which he had been before taking; in addition to which, he directed that a large-sized metallic bougie should be passed three times a week, and kept in the urethra for several minutes.

Considerable irritation was produced by this treatment along the whole course of the urethra, and a slight scalding in making water. For the first few times a trifling hæmorrhage also followed the use of the bougie. In the course of a fortnight the size of the testicle was evidently diminished, and there was much less tenderness on pressure. The use of the bougie was continued for nearly three months, and during this time the swelling of the testicle, the pain, and indeed every appearance of disease, gradually subsided. The patient could take active exercise without the slightest uneasiness.

Several years have now elapsed since the occurrence of the disease. The gentleman has enjoyed perfect health, and is in full possession of the power of which he was once so much in danger of being altogether deprived; for there was every reason to fear that the remaining testicle must be removed.

It was the opinion of the late Mr. Ramsden, that some cases of sarcocele might be relieved by removing, with bougies, a morbid irritability of the urethra, which he presumed, theoretically, to be sometimes connected with

the origin of the complaint. Whether the case I have related tends to support this doctrine, I will not venture to determine. The efficacy of the practice to which it leads cannot, I think, in this instance, be doubted.

Mr. Cooper*, in commenting upon the use of bougies in cases of sarcocele, as recommended by Mr. Ramsden, remarks, "the novelty of this suggestion for a time attracted considerable notice; but the interest which it once excited has now died away, a sufficient proof to my mind that the practice inculcated was not of much value." Unless I am mistaken, Mr. Cooper much underrates the confidence which the most competent surgical authorities still place in the treatment suggested by Mr. Ramsden, although it may not, perhaps, be in such general use as to render an additional proof of its *occasional* efficacy altogether superfluous.

It is remarkable that the brother of the gentleman whose case I have related was afterwards attacked with a similar disease, in consequence of which it became necessary to remove both the testicles. He died of pulmonary consumption. I am unacquainted with the progress of the disease, or with the treatment that was adopted in this case.

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On the Use of Nitrate of Silver in Vaginal Discharges. By GEORGE JEWEL, Esq.

After observing on the distressing nature of vaginal discharges, and the error in practice which the common appellations of "whites" or "weakness" are calculated to produce, Mr. Jewel continues—

"It would appear, from a strict investigation into the numerous causes of leucorrhœal complaints which have fallen under my observation, that one uterine affection gives rise to vaginal discharge more frequently than any other—namely, a subacute or chronic inflammation of the cervix uteri. I am disposed to believe, also, that very many of such cases are mistaken for carcinoma uteri, and that, in consequence, either no remedies are prescribed, or a very inefficient mode of practice is adopted. I am aware that, in many cases, the train of symptoms

* Surgical Dictionary, fifth edition, p. 1061.

about to be noticed may be attributed to an irritable condition of the uterus, so ably described by Dr. Gooch. I cannot, however, easily relinquish the opinion I had originally entertained upon the subject, namely, that inflammation, either of the chronic or sub-acute kind, of the cervix uteri, is, in the majority of cases, the exciting cause of vaginal discharge. The distinction, however, although pathologically recognized, cannot, I conceive, be material in practice: indeed, this will be obvious to the talented author himself, whose mode of practice, in cases of irritable uterus, appears precisely applicable to cases of chronic uterine affections generally. Again, in some cases it may be difficult to discriminate between such diseases as I have alluded to, and incipient scirrhus disorganization. The following remarks will probably assist the young practitioner in his diagnosis.

This inflammation of the cervix uteri, like scirrhus or other organic disease of the uterine system, attacks occasionally at the period of life when the catamenia are about to cease; but I have more frequently found it to exist in married women, from the age of twenty-six or twenty-seven to that of forty, and very recently I have seen several severe cases occurring in young married females, within three months after the birth of the first child. The local symptoms in both diseases are very nearly allied, namely, occasional lancinating pain, more or less acute, through the region of the uterus; with a constant dull kind of pain about the inferior portion of the sacrum, the hip, or groin; attended also by an irritable bladder, or frequent desire to void the urine, and in some severer cases by tenesmus. The vaginal discharge is of a milky or cream-like colour, and is commonly, but particularly in the more acute cases, mixed with a dark-coloured or grumous secretion. Upon making an examination per vaginam in this disease, the os uteri will not be found open to the same extent as in carcinoma, nor will its margin present the same cartilaginous hardness to the touch. The pain does not appear to be situated in the edges of the os uteri, as described by Mr. Burns, but in the cervix, as pressure upon this part alone occasions the patient to complain. The uterus will be found projecting lower in

the vagina than natural; but this will depend upon the nature of the complaint: the more acute, the farther it will have descended.

"It is not my intention to dwell upon the routine practice usually had recourse to in uterine diseases; such as the local abstraction of blood, perfect rest, narcotics, the warm bath, &c.; but rather to draw the attention of the profession to a therapeutical agent, which I believe has never, or to a very limited extent, been employed in such cases, namely, the nitrate of silver applied directly to the part affected; a practice which I have been led to adopt from having so frequently witnessed the extensive and healthy changes which have resulted from the application of this remedy to the different mucous tissues, when their secreting surfaces had taken on a disordered or unhealthy action. The mode I have adopted in its application has been either to conceal it in a silver tube, precisely upon the principle as it is employed in cases of stricture, (except that the tube should be adapted to the size of the caustic,) or in the form of solution, in the proportion of three grains to the ounce of water, the strength being gradually increased. A bit of sponge, firmly and neatly tied to a piece of whalebone, is to be moistened with the solution, and carefully introduced into the vagina up to the os and cervix uteri. This mode of application is preferable to the injection, and can easily be effected by the patient herself. The application should be frequently made, or no permanent good can be anticipated."

Some cases are given in illustration, and the author concludes by remarking, that, though he by no means supposes that the diseases of which he treats are to be eradicated as if by magic, yet that he knows of no remedy so likely to afford such immediate and permanent relief.

On the Adulteration of the Hydriodate of Potash. By J. PEREIRA, Esq. F.L.S. Lecturer on Chemistry and Materia Medica, &c.

Mr. Pereira suspects that adulterations of the hydriodate of potash are frequently practised, and if so, the circumstance will account for much of the contradictory testimony with regard to it. The following extract contains an

account of the modes he proposes of detecting impurities;—

“ The substances most likely to be met with are the carbonates, sulphates, and muriates, which may be detected thus:—

“ 1. If the *carbonates* are present, they may be known by lime-water, muriate of barytes, or sulphate of magnesia, producing a white precipitate in a solution of the suspected salt, soluble with effervescence in muriatic acid. Sugar of lead also produces a white precipitate, which effervesces on the addition of muriatic acid; chloride of lead being precipitated.

“ I would, however, here remark, that if any of the above precipitates be small, and the quantity of fluid large, the effervescence may be hardly, or not at all perceptible, owing to the solution of the carbonic acid in the fluid.

“ It may happen also, that although the hydriodate is adulterated with the carbonate of potash, yet the white precipitate produced by muriate of barytes may not be *wholly* soluble in muriatic acid, owing to the carbonate of potash of the shops usually containing some sulphate mixed with it.

“ 2. The *sulphates* (as of soda) may be detected by a solution of sulphate of magnesia producing no precipitate; but a solution of muriate of barytes produces a heavy white precipitate, insoluble in muriatic acid. This adulteration is, I believe, very rare.

“ 3. The *muriates*, according to Chevallier and Robiquet, are frequently present. Indeed, the latter chemist states that they may be one of the results of the operation to form the hydriodate. The peculiar saltish taste would lead us to suspect the presence of either muriate of soda or of potash. However, we may determine this chemically.

“ Add a solution of nitrate of silver to the suspected solution, and a yellowish white precipitate will fall down; to which add excess of liquor ammoniæ, and stir the mixture. After letting it stand for a little time, filter. If the filtered liquid throw down a white precipitate on the addition of nitric acid, the suspected salt contained a muriate.

“ The theory of this process is very simple. Nitrate of silver throws down, in a solution of the pure hydriodate, a yellowish white precipitate of iodide of silver, *insoluble* in ammonia. From the solution of a muriate, the nitrate of

silver throws down a white precipitate of chloride of silver, *soluble* in ammonia. Hence, then, when a solution of nitrate of silver is added to a solution of the hydriodate adulterated with a muriate, we obtain a precipitate consisting of the iodide and chloride of silver. Ammonia dissolves the chloride, but leaves the iodide. When the liquid is filtered, and an acid is added, the chloride of silver is precipitated.”

Experiments and Observations on Mesmerism. By RICHARD CHENEVIX, Esq. F.R. & E.S., M.R.I.A. &c. (5th and last article.)

This paper consists chiefly of a memorandum from Dr. Elliotson, who, we are informed by Mr. C., devoted a considerable share of attention to the experiments he made while in London. Part of Dr. Elliotson's narrative runs thus—

“ A fourth patient was now seated in the chair. She exhibited no apprehension of any kind, but was talking very cheerfully to me. Mr. C., without saying one word to her, began his manipulations, at the distance of half a foot, but did not touch her. In about one minute she said, in a plaintive voice, “ Sir, don't do that;” and seemed in great distress. She afterwards told us that Mr. C. drew weakness into her, and made her feel faint. She complained of pain in the abdomen. Mr. C. moved his hands transversely before it, and she said the pain was gone. (She had felt a slight pain there before we saw her). She then complained of great uneasiness in her chest; and after some transverse movements, made by Mr. C. with the intention of removing it, she declared it was gone. The pain in the abdomen returned, and ceased, as before, by the manipulations of Mr. C. Mr. C. then darted his open hand towards one arm, without touching it, and told her to raise both arms. She scarcely could move that which he had thus mesmerised. He then made some transverse passes before it: she at once moved it, and declared the stiffness and uneasiness to be gone. The same was repeated with the other arm, and with the same effect. He told her to lift her feet: she did so with perfect ease. He then darted his hand toward one leg, and she stared with astonishment at finding that she could not stir it without the greatest difficulty. He then made some trans-

verse passes, when she instantly raised it, and said there was neither pain nor stiffness in it. He then closed her eyes, and put a very small piece of paper, weighing perhaps one grain, on her foot, in such manner that it was utterly impossible she could perceive it: she could scarcely move that foot. The paper was removed in the same manner, and without her knowing it: she could instantly raise her foot. She now complained of pain about the heart: Mr. C. demesmerised her, and she said it was gone. In all these experiments, Mr. C. had most clearly announced to me, in French, what his intentions were; and the effects coincided so accurately with those intentions that I confess I was astonished. Deception was impossible. Mr. C. looked round at me, and asked, in French, if I was satisfied. I really felt ashamed to say no, and yet I could scarcely credit my senses enough to say yes. I remained silent. He then asked me, still in a language unintelligible to the patient, 'Shall I bring back a pain or disable a limb for you once more?' I, of course, requested that he would do so. He complied instantly, giving her a pain in the chest once, and disabling her several times from moving her limbs, and removing those effects at pleasure, according to the intentions which he announced to me; the whole taking place exactly as it had done in every former trial on this woman. As, however, she began to feel faint and uncomfortable, Mr. C. judged it prudent to desist; assuring me that such experiments as these should never be repeated, but with moderation, and only by experienced mesmerisers.

"On questioning this woman a few days after Mr. C. had produced such decided effects upon her, respecting what had occurred, she declared that he had disabled first one limb, then another, and restored their use, exactly as appeared to be the case; that she never had felt any thing like it in her life before: that, though she had not slept during the operation, she had felt very drowsy; that she had not been at all afraid; but, said she, 'I hope never to see that doctor again, as I am sure he has something to do with the devil.'"

Mr. Chenevix began this series of papers by declaring that "mesmerism is true"—a position from which we were compelled to dissent. He concludes them by stating that "mesmerism is

true—or false," a mode of putting the proposition so ingenious that no one can possibly avoid coming to the same conclusion.

MEDICAL GAZETTE.

Saturday, Oct. 31, 1829.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

IRISH APOTHECARIES.

THE late proceedings in Apothecaries' Hall, Dublin, of which we gave a most condensed account in our last number, were of so singular a character, that it may be permitted us shortly to revert to them. That the parties were in earnest, and had some real grievances to complain of, notwithstanding the strange scenes which were enacted on the occasion, we are by no means disposed to doubt. This advantage, at least, they would seem to have gained, that their tumultuous and somewhat whimsical altercations have called the public attention more directly upon them, than, perhaps, a more quiet and orderly mode of proceeding could possibly have effected. And we shall ourselves take this opportunity of stating some facts which have come to our knowledge, relating to the past and present state of the Apothecaries' profession in Ireland.

The number of licensed Apothecaries in Ireland is calculated at about a thousand, and their qualification as regular practitioners is derived from a governing body, entitled the Apothecaries'-Hall Company. Of the origin and constitution of this Company, we mean to enter into a short detail, the better to understand the nature of those imperfections which have been so boldly charged upon them, and we shall then

see what measures have been proposed for their remedy. It is to be regretted, that in the heat of disputation, excited at the late meetings, those abuses were so unqualifiedly attributed to persons, which are, in truth, only chargeable on a system originally ill constructed; there is, however, some satisfaction in being able to add, that since those angry discussions, the principal "assertor" has come forward and offered every apology for his unfounded imputations, even to the tendering of a written *amende**. The mutual concessions, indeed, which have led to the miraculous union resulting from these meetings, augur the most favourable issue to the arrangements in contemplation.

It may well be conceived, that no attempt was made in Ireland to regulate the profession of pharmacy until necessity called loudly for it; and, in fact, 40 years have not quite gone by, since the art of the apothecary existed in the most deplorable condition in that kingdom. Fraud was added to ignorance; and that too in a calling in which ignorance alone was but too often fatal. Not always had the patient so good a chance of escape as when a certain sick man was well exercised in a *wheelbarrow* after a dose, in consequence of the concluding phrase of the prescription being "*e quovis idoneo vehiculo.*" Instances of this kind were not rare in Ireland. But it is needless more particularly to exemplify the state of things at the period to which we allude; suffice it, that the country swarmed with the most impudent and dangerous pretenders.

Yet a few—a redeeming few—were found, who felt the necessity of forming a union for the protection of themselves and the community. They combined in the form of a joint-stock company, and obtained from Government an act of incorporation, which professed

to arm them with full powers to reform and regulate their profession. Our lawyers and framers of laws are not always the most clear-sighted people in the world; whether from actual or pretended incapacity we will not positively affirm, but true it is that here, in this incorporating instrument, were a loop-hole or two, quite large enough, as it turned out, for a coach and six to be driven through them. It was soon discovered that from a remarkable omission in the wording of the act, its main object was well nigh abortive. For instance, after a copious detail of very unexceptionable arrangements with regard to seven years' apprenticeships, without which it was intended that no man should exercise the art or mystery of an apothecary in Ireland, it was further ordained that previously to his opening a shop he should be examined at the Hall, to give proof of his competency. But singular to relate, it was altogether omitted that the candidate for such examination should have served any apprenticeship at all. The clause to which we allude—the 23d of the Act of Incorporation, barely states that "no person shall open shop, or act in the art or mystery of an apothecary in Ireland, until he shall have been examined as to his qualifications and knowledge of the business, and the examiners shall grant or refuse him a certificate." Strictly, then, according to the letter of the law, and according to some of the best opinions, it appears that any candidate, no matter whether he have or have not served an apprenticeship, is entitled to, nay, can demand and insist upon an examination. Whatever may have been the spirit of the legislators and framers of the bill on the subject—and we can hardly suppose them capable of such gross absurdity as the literal acceptance of the clause would imply—the door was thus opened to very glaring abuses, and the apo-

* Mr. Kenny, of Waterford: see the public prints.

thecary's profession in Ireland reduced to a state of the utmost degradation—affording a practical illustration of the effects of the *non-certificate* system, so strenuously contended for by some wiseacres in this country.

It might indeed be asked whether a strict examination before the Directors of Apothecaries' Hall would not afford sufficient protection to the public without apprenticeship? But unfortunately a satisfactory examination can hardly be enforced, for here again the act presents us with another of its peculiarities. It is further enacted, that "if any person who has been examined by the Directors of Apothecaries' Hall, and rejected, shall think himself aggrieved, he may appeal, first, to a general council of Apothecaries' Hall, and afterwards to the College of Physicians, who shall re-examine him, and affirm or reverse the judgment of the Council." This is a stumbling-block indeed: the Directors must either pass the candidate in the first instance upon evidence of his capability, perhaps not satisfactory to their consciences, or run the risk of having their decision reversed by a higher tribunal; and by a tribunal too of whose competency to determine the candidate's "qualification and knowledge of the business," they are naturally inclined to express their doubts. Whether their doubts be well founded or not, we shall not now stay to inquire, sensible as we are of the influence which a certain *esprit de corps* must always exercise in such considerations; but we think it obvious that prudence should prompt them to avoid, if possible, the obnoxious alternative.

In consequence of these arrangements, the most serious abuses were gradually introduced. An apprenticeship was deemed unnecessary—it seemed to be an expensive mode of proceeding, and not legally requisite. Many who never regularly served a

day in an apothecary's establishment demanded an examination, and their license; while many opened shops without any license whatever.

The probability of the occurrence of cases so flagrant as this last, was, of course, provided against by the act of parliament, but in a manner the most inefficient and inadequate. The Company were empowered to recover 20*l.* penalty against the offender in any of his Majesty's courts of law in Dublin. The penalty might, for instance, be recovered in the King's Bench, with considerable costs; but it did not follow that either penalty or costs would or could be paid by the defendant; the Company were generally the sufferers in such prosecutions. Yet, notwithstanding the inadequacy and absurdity of this protection, the Apothecaries' Hall did, in numerous instances, and at great pecuniary risk, vindicate their privileges; and attempt a reformation. The offenders were still gaining ground, and promising to support each other in offering a powerful resistance to the "monopoly," as they were pleased to call it, of the Apothecaries' Hall; but the verdict of a jury proved decidedly unfavourable to their views, and induced them to adopt a new line of proceeding. They accordingly got up a petition, and had it presented to the House of Commons during the last session. Some of the statements in this document are curious: we shall just point out a few of them, and avail ourselves of the observations of Mr. Donovan, contained in his recent pamphlet on the State of Pharmacy in Ireland*.

"The title sets forth that it is 'the petition of the *physicians, surgeons, and apothecaries* of the north of Ireland.' This title will, no doubt,

* Reflections on the Present State of the Profession of Pharmacy in Ireland, by M. Donovan, M.R.I.A. Dublin, 1829.

be admitted to be very astute, when it is considered that it aims at giving the weight of three different branches of the profession to the petition; and when it is understood that it is not the petition of any physician, any surgeon, or any apothecary, but of a set of men who each in his own proper person professes to combine the three departments; but as these persons hold no license, they are but *soi-disant* apothecaries*.”

To the charge “that from the period of incorporation until rival establishments arose in Dublin, the Company made no effectual effort to enforce the provisions of the act, or to benefit the profession,” Mr. Donovan replies very satisfactorily. He repels the insinuation that the prosecutions commenced by Apothecaries’ Hall against the unqualified apothecaries of the north of Ireland were instigated by selfish or unworthy motives; he shows the absurdity of supposing that any establishment in that country could rival the Company of Apothecaries’ Hall; and he states it strongly, that so far from tamely looking on at the progress of abuses, they have since the period of their incorporation, in the year 1791, taken law proceedings for the purposes of punishment in no less than 473 instances. “This astounding assertion of the petitioners,” says Mr. Donovan, “was even ventured upon as a defence at the late Carrickfergus trial of the Hall Company against a gentleman for practising as an apothecary without a license; but it met with the deserved censure by a ready contradiction from the Bench, for the learned judge declared that he had presided at one of these trials himself some years before, in which the Apothecaries’ Hall Company were successful.”

The petition concludes with something like a proposal to parliament,

that the profession of an apothecary should be thrown open to all persons who obtain diplomas to practice in other departments from the British Universities and Colleges of Physicians and Surgeons. On this head Mr. Donovan’s remarks appear to be so judicious, that we shall find room for one or two more extracts.

“I shall now assign reasons for believing that the profession of an apothecary should not be thrown open to the public; that the adoption of it should be placed under some restrictions, and that a monopoly in the profession, to a certain extent, is conducive to the welfare of society. This can be done by an illustration easily understood. If any department of trade—say, for example, cloth weaving—were confined to one manufacturer, there is no doubt but that the interests of the community would suffer: the consumer would have no alternative between the purchase of whatever quality the manufacturer thought fit to impose on him, or doing without the article altogether. The utility of establishing a second, third, or any reasonable number, is, in this case, manifest; by competition, the article is improved in quality or reduced in price. Suppose that the competition is so great as to reduce a certain quality of cloth to its *minimum* price. By further competition, the price may certainly be further reduced, but the quality must be deteriorated. Here, however, but little injury is done to the public, for the bad quality of the cloth discovers itself; it speedily wears out, changes its colour, tears, and, in fine, evinces to the purchaser that he derives no real advantage from this apparent reduction of price. This point once established, the evil produces its own remedy. But a moment’s reflection shews that this cannot be the case with regard to compounded medicines. Moderate competition will do some service in this case also, but when it becomes inordinate, it ceases to be a benefit. Let us suppose, as in the former case, that by competition the price of compounded medicine is reduced to its *minimum*, the quality being the best. Competition may still reduce the price, and deteriorate the quality as before;

* Reflections, p. 18.

but here the analogy ceases; for in the case of compounded medicine the consumer can never discover the badness of its quality; there is no criterion; its failure to produce beneficial effects on the animal economy is none, for the best quality might also fail, and how is it to be decided whether the failure is attributable to the inefficiency of the medicine or the obstinacy of the disease? Nay, the physician who prescribes it is as much in the dark. But besides these effects of competition, it may happen that the total business to be done in a district may be so divided amongst the competitors, that, although the little that remains to each may be well paid, still the apothecary, at the winding-up of his year's accounts, may find that his business is below his notice. Will he, then, faithfully and attentively serve the public, when it is made his interest to act otherwise, and when dereliction from duty can certainly escape detection, unless he is a man of inflexible moral sense? It would not become me to answer the question: let every one decide according to his experience of mankind. In fine, though it is a common maxim that competition is the life of trade, there could be no greater mistake committed than to apply the principle to the compounding of medicine: it is a death-blow to the dearest interests of society. The competition will affect the scale of charges only, and not the excellence of stock*."

But we must conclude. It only remains to be inquired what means should be adopted for the purpose of regulating the profession of the apothecary in Ireland. The legislative body, in whom the power, to a certain extent, resides, seem to be aware of their absolute inability to give satisfaction to all parties. That they have not been quite fairly dealt with, we have little doubt; and the very circumstance, as we remarked in our former observations, that the most opposite and contradictory charges have been made against them, ought rather to weigh in their favour. A party in the North of Ireland have complained

to parliament that they are persecuted with vexatious prosecutions; but a party in the South are complaining much more loudly that these prosecutions are not half numerous enough, and that they should have commenced long before. This clashing of opinions and opposite interests, however, is very far from proving that the present governing body should be abolished; though it may forcibly demonstrate the necessity for a reform. Constituted as the Apothecaries' Hall Company is at present, it is peculiarly open to objections. It consists nominally of sixty persons, or shares; but these shares, it seems, may be so disposed of (four to one person, for example), that the actual number of members constituting the company may be reduced to fifteen; a narrow monopoly, in all conscience, to be entrusted with the regulation of the whole profession. Mr. Donovan's plan is to increase the number of shares to eighty; and he advises that each of these be conjointly possessed by five individuals: thus the number of proprietors will be extended from sixty to four hundred. The proposed arrangement is said to have given universal satisfaction; and, indeed, we should think that it ought to satisfy even the boldest advocates for "throwing open the monopoly."

MR. LAWRENCE'S LECTURES.

THE rage of the Editor of the *Lancet* at the continued and increasing success of this Journal, knows no bounds. His vocabulary of abuse is in constant requisition, and in this respect we are fain to own ourselves his inferiors. We mentioned, a fortnight ago, that he had repeatedly insinuated that Mr. Lawrence guaranteed the accuracy of his lectures as they appeared in that Journal; and knowing this to be false, we published to the world that it was so, and dared the Editor of the *Lancet* to contradict. This worthy meet our

* Reflections, &c. p. 25-28.

defiance?—just as we expected. He links the question altogether as regards himself, and turns it off by saying, that, at all events, Mr. Lawrence does not correct them in this Journal. Who ever said that he did? We hold it to be contemptible and dishonest to throw upon another the burden which properly and exclusively belongs to our reporter and ourselves.

It may, perhaps, be said that Mr. Lawrence did formerly correct certain lectures of his which were published in the Lancet, and therefore may again. There is, however, this essential difference between the cases: Mr. Lawrence had his lectures on the Eye written out and fully prepared for publication, so that he could have no motive for wishing to avoid rendering himself answerable for the opinions they contained; but in the present case he has not his lectures written, and therefore, *we believe*, that but for his apprehension that the Lancet would publish them at all hazards, he would not have suffered them to meet the public eye at present in any of the Journals. We positively aver, then, that the insinuation that Mr. Lawrence corrects the press of his present lectures in any of the Journals is an unworthy trick to promote the sale of the work at the expense of the Lecturer's reputation; and which, if persevered in, will probably call forth some more decided denunciation of its falsehood.

We also stated that Wakley had the impudence to advertise the publication of Mr. Lawrence's lectures without informing that gentleman of his intentions. This the Lancet says is "a lie" (we like to give the precise words), and yet this we deliberately repeat. In the early part of September a puffing advertisement of the Lancet, in which that Journal was designated as "unparalleled," "unrivalled," and "unequaled," went the round of the provincial papers, especial care being taken that it did not appear in the London press; and in which, among other things, was announced the publication of Mr. Lawrence's lectures. In these advertisements it was not stated that Mr. Lawrence's consent had been obtained, nor was this addition made till the very end of the month, when our advertisement was already in circulation. Will Wakley venture to say that Mr. Lawrence was aware of his intentions

when he published these first advertisements in the country? If he does, we have an answer ready.

NEW REGULATIONS OF COLLEGE OF SURGEONS.

(Confirmed October 29).

Regulations respecting the Professional Education of Candidates for the Diploma.

I. Candidates will be required to bring proof

1. Of being twenty-two years of age.
2. Of having been engaged six years in the acquisition of professional knowledge.
3. Of having studied Anatomy, by attendance on Lectures and Demonstrations, and by Dissections, during two anatomical seasons.

An anatomical season is understood to extend from October to April inclusive.

4. Of having attended two courses of Lectures on Surgery, each course comprising not less than sixty Lectures.
5. Of having attended Lectures on the practice of Physic, on Chemistry, and on Midwifery, during six months; and on Botany and Materia Medica during three months.
6. Of having attended during twelve months the surgical practice of a recognised Hospital in London, Dublin, Edinburgh, Glasgow, or Aberdeen; or for six months in such an Hospital, and twelve months in any properly constituted provincial Hospital, acknowledged by the Council as competent for the purposes of instruction.

It is earnestly recommended that Candidates shall have studied Anatomy, by lectures, demonstrations, and dissections, for one anatomical season prior to their attendance on the surgical practice of an hospital.

II. Members and Licentiates in Surgery of any legally constituted College of Surgeons in the United Kingdom; and Graduates in Surgery of any University requiring residence to obtain Degrees; will be admitted for examination on producing their Diploma, License, or Degree.

N.B All Certificates recognised by the Royal Colleges of Dublin and Edinburgh, or by the Universities of Glasgow and Aberdeen, as to attendance on Hospitals or Lectures in these places respectively, will be received.

ONE OF WAKLEY'S WITNESSES.

In another part of the present number will be found a report of the action of

the King *versus* Clapham. This unfortunate young man was one of the witnesses brought by Wakley against Mr. B. Cooper, and his history affords a striking lesson to those who imagine that they can form disreputable connexions without the risk of their principles being contaminated, their characters blasted, and their prospects in life destroyed.

MEDICO-CHIRURGICAL OMNIBUS.

To the Editor of the London Medical Gazette.

SIR,

I AM sure your readers will rejoice to learn that it is in the contemplation of the Council of the Medico-Chirurgical Society, in consequence of the extreme thinness of its meetings, and the complaints made of the inaccessibility of the society's rooms, to establish an *omnibus* in its service, for the express purpose of bringing members, with cheapness and facility, to its meetings; the greater portion of the members having no carriage, and most of those who have one not caring to use it at night. The following has been handed about as an outline of the scheme intended to be proposed for the adoption of the society.

That the *successful* members be requested to make over their cast-off carriages to the treasurer, who will contract with some cheap coach-maker to unite them together, so as to form one long coach, after the manner of an *omnibus*; which title it is to bear from the circumstance of its being intended to convey indiscriminately physicians, both fellows and licentiates; surgeons, hospital, military, and common; accoucheurs, whether doctors or misters; apothecaries, high and low; in short, in it is to be the *omnium gathering* of the profession. No seats will be set apart for knights and baronets even, but "first come first served" is to be the motto of the vehicle.

The *accoucheur* members, being most in the habit of driving, and knowing the streets best, are to be requested to lend their aid in rotation, each as *coachman* for the night. Their habits

of *delivery* afford the best chance of exactness and punctuality in setting down and taking up, and the management of parcels on the way. The honorary secretaries have already volunteered their services in turn, each as *conducteur* for the night; and it is proposed that one of the council shall always attend as *cad* to the Omnibus.

The coach is to start with one horse, from a given point at the West end of the town, at eight o'clock on the nights of the meetings, and to take a circuit through the principal streets (to be named hereafter) at a moderate pace, the *cad* knocking at the door of each member on the way, and receiving sixpence a head for the accommodation, to be placed to the funds of the society, out of which there is to be provided *tea* and *coffee* at the meetings, that the members may not urge the interruption of their evening refreshment as an excuse for non-attendance. At the breaking-up of the meeting, the Omnibus, with its live cargo, will return by the same route which it followed in coming.

The advantages of this plan will at once combine utility, economy, and convenience. A *reunion* of the profession, so much desired, will thus be formed, and an opportunity given for the discussion of professional topics *en route*, and, like the ancient peripatetics, we shall possess an ambulatory source of improvement and reasoning. A sort of flying conversation will be kept up fortnightly, and the scruples of many worthy and respectable members of the pedestrian order (for, as Horace says, "some slay in chariots, some on *foot*,") respecting being seen among the purlieus of Drury Lane, and elbowing the company at the *soirées* round the gin-shops of Holborn, will then be set at rest, and general satisfaction afforded.

The social advantages to the profession, from this plan being adopted, are indeed incalculable; and no doubt can be entertained of the moral influence it will have upon us, by thus amalgamating the *exclusives* and the *odd ends* of the profession together, and jolting them into harmony and good humour with each other. The public also will gain by this arrangement, for the nights on which the Medico-Chirurgical Omnibus passes along being known, visits, appointments, consultations, &c. may be easily made, and five minutes

will be allowed every passenger for visiting a patient on the road before nine o'clock, and after the meeting, till midnight.

We may now congratulate the society on the prospect held out of its recovering its falling reputation and interest, and we have no doubt of its coming again into fashion, by the magic influence of the Omnibus, which will directly tend to remove all the serious objections to the society on the score of its locality and the abominable approaches to its rooms. As the society will not move to a more accessible spot, some such means as here detailed certainly become necessary to entice members to give their time and talents as well as money.

Your constant reader,
MEDICO-CHIRURGUS.

October 26, 1829.

PROCEEDINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY,

October 27.

Dr. Lee's Paper on Uterine Phlebitis and Phlegmasia Dolens.

In a former communication which Dr. Lee presented to the Society, on the pathology of phlegmasia dolens, he was led, from various facts, to infer that inflammation of the iliac and femoral veins gives rise to all the phenomena of that disease in puerperal women. Subsequent dissections have enabled him not only to confirm the accuracy of the former observations, but have led him to discover the important pathological fact, that in phlegmasia dolens the inflammation commences in the uterine branches of the hypogastric veins, and subsequently extends from them into the iliac and femoral trunks of the affected side.

The object of the present communication was to submit the different facts which have led him to this conclusion, and to detail the observations he has made on inflammation of the uterine veins.

In the first of the cases he detailed, there succeeded, after a short interval, to the usual symptoms of phlegmasia dolens, those which characterise phlebitis in its severest forms, viz. rigors, prostration of strength, rapid feeble pulse, low

wandering delirium, attacks of vomiting and diarrhoea, with brown parched tongue, and ultimately rapid and destructive inflammation of the eyes, and purulent deposits in the substance of the lungs. Morbid appearances were also observed in the veins, demonstrating that the alterations in the structure of that system of vessels were produced by inflammation; and further, that the right iliac veins were affected at a much earlier period than the vena cava, and those of the left side. The veins of the right side were partially obliterated, and the principal changes they had undergone appeared to be of long standing, and to be perfectly distinct in respect to the period when they had taken place from those observed in the other veins, and to be referable to the effects of a former attack of phlegmasia dolens.

Though the branches of the hypogastric veins were not traced to the uterus, in consequence of the unfavourable circumstances under which the dissection was made; and although no sign of recent disease could be perceived in the tissues of this organ, yet from the complete obliteration of the trunks of the hypogastric veins, and the contracted and reduced state of their coats, it may be reasonably supposed that their branches were similarly affected, and that the disease originated in them.

The history of the second and third cases, and the morbid alterations of structure observed in the iliac, femoral, and hypogastric veins, demonstrated that these changes were the result of inflammation, and that this inflammation had commenced in the uterine plexus of the hypogastric veins, and extended along their internal membrane to the great venous trunks of the pelvis and inferior extremities.

Dr. Lee next adverted to a case of obliteration of the vena cava and its principal branches, after parturition, recorded by Mr. Wilson, where the inflammation which had produced the morbid appearances was found to have commenced in the uterine veins. "The coats of the emulgent veins, and of their branches, were thickened, and their cavities filled with coagulable lymph. Both the spermatic veins were remarkably thickened, and their cavities completely obliterated; as were the primary iliac veins until they had nearly reached the groin, and the internal

iliac veins, with most of their branches, particularly those which returned the blood from the uterus. The uterus was much larger than usual, the coats of its principal veins were thickened, and their cavities partially obliterated. The small branches, both in its substance and in its internal surface, were very numerous, and much distended with blood. The vessels of the lower extremities were in a perfectly healthy condition; no accumulation of blood had taken place in the veins, nor had any watery fluid collected in the cellular membrane."

The anastomosing branches of the veins on the sides and back part of the pelvis were much enlarged, as were also those between the vena saphena major and the branches accompanying the deep-seated arteries passing through the foramen magnum ischii and the sciatic notch: large communications existed between the *vênæ pudicæ externæ* and the lower branches of the inferior mesenteric vein, which was enlarged to treble its natural size.

Two other cases of a similar description are mentioned by Mr. Wilson, in both of which the veins of the uterus contained pus*.

As none of the symptoms of phlegmasia dolens were present in either of these cases, and as neither pain nor swelling occurred in the left inferior extremity of the patient whose case was first detailed, though the common and internal iliac veins were both completely impervious, it would seem to follow that it is essentially requisite to the production of the disease that the inflammation should extend from the iliac into the principal veins of the extremity. In all the examples of phlegmasia dolens which have come under the observation of the author, this extension of the inflammation has been distinctly marked by increased sensibility, and by a hard and distended state of the femoral vein, from Poupert's ligament along the inner portion of the thigh.

The author, after alluding to cases recorded by M. Meckel, Bouillaud, Velpeau, &c. proceeded to speak of those by Dr. Davis.

In Mr. Lawrence's account of the morbid appearances observed in the

first case related by Dr. Davis, no particular mention is made of the condition of the hypogastric veins, nor does it appear that the course of these vessels was traced to their termination in the iliacs. Mr. L. indeed observes, that the uterus and its appendages, and blood-vessels, were healthy; but of the accuracy of this Dr. Lee entertained some doubt.

The condition of these vessels in Dr. Davis's second and third cases, is likewise unnoticed; but in the fourth it is stated "that the left internal iliac was greatly inflamed, and its diameter so much contracted by the morbid thickening of its parietes, that it was rendered almost impervious." The left external iliac contained a coagulum of blood, which did not adhere to the internal membrane; and in the common iliac, adhesion between the coagulum and inner membrane had taken place; thus shewing that these vessels had become inflamed subsequently to the affection of the internal iliac vein*.

Dr. Gooch had an opportunity in 1823 of examining the uterus of a patient who had died of phlegmasia dolens, and he found the uterine sinuses severely inflamed, several of them being plugged up with lymph, and their inner surface coated with a membrane of a red mulberry colour. The state of the hypogastric and iliac veins was not ascertained. To Dr. Locock, who also examined the uterus, Dr. Lee was indebted for this fact.

None of the eminent authors who have now been quoted have made any allusion to phlegmasia dolens commencing in the uterine veins; and M. Velpeau, the latest continental writer on this subject, has given it as his opinion that the affection of the veins is not the primitive disease, but is the consequence of the inflammation and suppuration of the articulations of the pelvis, with which he has observed it to be occasionally combined.

It is due to Mr. Guthrie to mention, that in a paper on inflammation of veins after amputation, published in the *Med. and Physical Journal* for 1826, he suggested the importance of tracing the veins from the common iliac of the affected side down to the uterus, and expressed his suspicion that the disease

* Transactions of a Society for the Improvement of Med. and Chir. Knowledge, vol. II].

* *Med. Chir. Transact.* vol. xii, p. 429.

would be found to originate in that organ.

All the different authors who have treated of phlegmasia dolens describe it as commencing, in the great majority of cases, subsequent to the tenth day after parturition, with symptoms of uterine irritation and constitutional disturbance of a low nervous character, and with pain and swelling in one extremity only. They have assigned various reasons for these remarkable peculiarities in the period and mode of development of the disease, such as pressure of the gravid uterus on the iliac veins during gestation, the change in the distribution of the blood from the sudden removal of this pressure, suppression of the lochial discharge, exposure of the extremity to cold, &c.; all of which, however, taken singly, or combined, are insufficient to account for the phenomena; and the occurrence of the disease after menstruation and abortion proves that the above causes are not necessary for its production*. The facts which have now been stated afford a more satisfactory explanation of these phenomena, and shew that if inflammation be excited in the orifices of the uterine veins, it may spread along these to the iliac and femoral veins, and by the morbid changes induced in them, give rise to all the subsequent symptoms.

With a view of illustrating the subject, the author next adverted to the principal facts relating to uterine phlebitis, of which he considered phlegmasia dolens to be merely one of the remote consequences.

The effects of inflammation in the uterine veins, are the formation of adventitious membranes on their inner surface, and the deposition of coagula of lymph, or of purulent matter, within their cavities. Coagula of the fibrin of the blood, which extended a considerable distance into the uterine veins, are formed in their orifices after every labour, and are the principal means employed by nature for the permanent suppression of uterine hæmorrhage. These may be distinctly perceived for a long period after delivery, and have a different form and colour from the coagula produced by inflammation. In opening the body of a patient four weeks after confinement, Dr. Lee observed distinct

traces of these partially absorbed coagula in the muscular substance of the uterus, at the part where the placenta had adhered.

The inflammation may be limited to the veins, but not unfrequently the muscular tissue of the uterus contiguous to them participates in the inflammation, and becomes of a dark red, or blackish brown colour, and so soft in its consistence as to be readily torn with the fingers. The peritoneal covering may be also affected, and the usual consequences of puerperal peritonitis will then ensue.

The veins which return the blood from the uterus and its appendages may be either wholly or in part inflamed; generally, however (and this is a circumstance in the history of uterine phlebitis deserving attention), the inflammation attacks the spermatic veins, and for the most part the one only on the side of the uterus to which the placenta has been attached; and it may either confine itself to a small portion of the vessel or extend throughout its whole course, from the uterus to the vena cava. The usual consequences of inflammation are then apparent,—viz. injection and condensation of the cellular membrane in which they are embedded; thickening, induration, and contraction of their coats, and the deposition of lymph, mixed with pus and coagula of blood within their cavities.

The same is true with regard to the hypogastric veins, one only being generally affected: but inflammation having once begun, it is liable, as Dr. Lee had before stated, to spread continuously to the veins of the whole uterine system, to those of the ovaria, of the fallopian tubes, and broad ligaments. The vena cava itself does not always escape, the inflammation spreading to it from the iliac or from the spermatic veins. This occurrence seldom takes place to a great extent through the medium of the spermatics, the inflammation terminating abruptly at the opening of the spermatic into it on the right side, or of the renal on the left. If it pursue, as it sometimes does, the direction of the kidneys, the substance of these organs, as well as in the veins, may be involved in the disease.

Uterine phlebitis appears to result from the mechanical injury inflicted by protracted labour, from the force required for the extraction of the pla-

* See Burns's Principles of Midwifery, p. 541. Capuron.

centa in the uterine hæmorrhagy, from retained portions of placenta undergoing decomposition in the uterus, the application of cold, and probably of contagion, and from various unknown causes operating on the uterine system after delivery.

It is, perhaps, impossible to determine, for the most part, the precise period of its invasion, from the total absence of local pain and of other symptoms; but it is probable that it most frequently begins soon after delivery, and remains stationary for a time, around the orifices of the uterine veins, as phlebitis has been observed to do where it occurs after venesection. Of this, however, we can have no certain proof, nor can it be admitted to be a general occurrence, from the rapidity with which the inflammation has been found to attack the uterine, spermatic, and renal veins. In one case, Dr. Lee saw the disease prove fatal on the evening of the fifth day after labour, and, on dissection, all these veins were found to be completely disorganized by inflammation.

It may be stated as the general result of all the observations which have hitherto been made on the subject of uterine phlebitis, that it occurs most frequently from the tenth to the twentieth day after parturition, though it has been observed to commence at an earlier, as well as at a much later period.

Where the veins alone are inflamed, the peritoneal and muscular tissues remaining unaffected, there is often either no pain or only a dull pain, with a sense of weight in the region of the uterus, and no other local symptom by which the disease can be recognized. The uterus, too, may return to its usual reduced volume, or nearly so; and it is only on the accession of the constitutional symptoms which have been previously detailed, that the existence of this insidious and dangerous affection can be determined. If the substance of the uterus be affected, this organ remains above the brim of the pelvis, large, hard, and painful on pressure, as in puerperal peritonitis.

With regard to the lochial discharge, it has sometimes been observed to be foetid and puriform, and at other times in a perfectly natural state.

The constitutional symptoms of uterine phlebitis, and the important alterations produced in the structure of the

brain, lungs, liver, and other internal organs, and also in the synovial, serous, and cellular membranes, are often so peculiar and characteristic, that it is the more remarkable this disease should have been so long overlooked by pathological inquirers. It is true it was stated by others, many years ago, but they pointed out merely the lesion of the uterine veins, without having observed the important constitutional effects to which the disease gives rise.

Recent experience has induced Dr. Lee to believe that uterine phlebitis is of far more frequent occurrence than has yet been suspected; and that to it must be referred many of the fatal disorders of puerperal women which have usually been comprehended under the vague designation of puerperal fever, or peritonitis. Inflammation of the uterus, and its appendages, may be considered as essentially the cause of all the destructive febrile affections which follow parturition; and the various forms they assume, inflammatory, congestive, or typhoid, will probably be found to depend on the serous, muscular, or venous tissues of the uterus being affected.

In order still further to illustrate the observations on uterine phlebitis, Dr. Lee subjoined an account of several examples of the disease, which have recently come under his observation; one of these, in which several striking peculiarities occurred, was published in this Journal, April 25th, 1829.

The first was a case of inflammation of the uterine and right spermatic veins after parturition, with gangrenous inflammation of the lungs and pneumothorax of the right side.

The second, uterine phlebitis with ulceration of the articular cartilages, and purulent effusion within the capsular ligament of the right knee-joint.

The third, inflammation of the uterine veins, with carcinomatous ulceration of the os and cervix uteri.

The fourth, inflammation of the left iliac and femoral veins, with phagedenic ulceration of the uterus.

Allusion was also made to the case of a woman, who died of cancer of the uterus in the wards of La Charité. She had ascites, and infiltration of the inferior extremities. On dissection, the principal veins of the lower extremities were found greatly distended with layers of coagulum, like those of an aneurismal sac, adhering intimately to their inner coats, which were red and thick-

ened. The external iliac, hypogastric, and common iliac veins, and the vena cava inferior, to near the diaphragm, were found in the same condition.

The manner in which cases of cancer of the uterus terminate, varies extremely in different individuals; some surviving many months the destruction of a great part of the body of the uterus, and the adjacent structures; while others die at an early period of the disease merely from a superficial erosion of the mouth or neck of the womb. This difference may depend in some cases on the greater or less degree of susceptibility of the constitution to the local injury; but it seems highly probable, from the facts now related, that death sometimes results from the production of inflammation in the veins of the uterus.

In cancer of the rectum, Mr. Lawrence has observed in one case, inflammation of the iliac veins; and Laennec has stated, "that it is not uncommon to find the veins in the neighbourhood of a cancerous breast filled with pus, either pure or mixed with blood; sometimes fluid, at other times, of the degree of consistence of an atheromatous tumor."

But little discussion ensued on this important and interesting paper, a circumstance to be attributed to the nature of the communication. A few remarks were made by Dr. Bright and Mr. Lawrence, who complimented Dr. Lee on the manner in which he had treated the subject.

THE KING *versus* JOHN CLAPHAM.

Court of King's Bench, Guildhall,
October 24, 1839.

THIS was an indictment charging the defendant that he intended to impose upon the Apothecaries' Company, and to induce them to admit him to the practice of an apothecary, produced to their secretary a paper purporting to be an affidavit, stating falsely that he was of the age of twenty-one years: in consequence of which the Court of Examiners were induced to admit him to an examination.

The *Attorney-General* (with whom was Mr. Follett) stated, that this prosecution was instituted by the Master and Wardens of the Apothecaries' Company, in order, if possible, to put an end to a very mischievous practice which had of late years grown up. The jury were probably aware, that among

several laws which had been made for the better regulation of the practice of apothecaries, was one which had been passed in the fifth year of the late king. The legislature, thinking it not safe to trust the lives of his Majesty's subjects in the hands of young and inexperienced medical practitioners, had passed a law, enacting that no person should be allowed to practise as an apothecary who was under the age of twenty-one years, or had not served a regular apprenticeship of five years. The act required that, before a person should be allowed to practise as an apothecary, he should obtain a license from the Apothecaries' Company, and for that purpose he was to be examined before the Court of Examiners, who were to certify as to his skill and ability. Before he could be admitted to such an examination it must be shewn that he had attained the age of twenty-one years, and had served a five years' apprenticeship. Of late years, these wholesome provisions of the legislature had been eluded, and the Apothecaries' Company had found it necessary to institute several prosecutions against persons who had attempted to impose upon them by false affidavits and forged testimonials. The charge against the young man who was the subject of the present prosecution, was, that he had imposed upon the Court of Examiners by producing an affidavit, purporting to be made by himself, in which he swore that, at the time he applied to be admitted to an examination, he was twenty-one years of age. The discovery of the fraud had been made by mere accident. The attorney of the Apothecaries' Company happened to read in the newspapers an account of a trial at Westminster, in which the present defendant was examined as a witness. He was on that occasion asked whether he was twenty-one years of age, and he replied in the negative. He was then asked how he had obtained his license as an apothecary, and he was obliged to confess that he had imposed on the Apothecaries' Company by making a false representation. This having occurred at a time when other cases of a similar nature had been discovered, the Apothecaries' Company thought it right to make those inquiries respecting the defendant which had led to the present prosecution. The defendant lived at a place called Thorney, in Northamptonshire, where he was born, and where his parents resided. Witnesses would be called who had known him from his infancy, and the register of his baptism would be produced. This document, with his own admission in the Court of King's Bench that he was under the age of twenty-one when he applied to be examined, would clearly establish the fact of his having imposed on the Apothecaries' Company.

Mr. John Watson examined by Mr. Follett.
—I am the secretary to the Court of Ex-

aminers of the Apothecaries' Company. I have been their secretary fourteen years and a half. Their course of practice is to require certain testimonials from persons who apply to be examined. They require evidence of apprenticeship, age, moral character, and education. The practice is, for candidates to leave the testimonials with the beadle at the hall. He deposits them in a bag, of which he keeps the key; and on a certain day he delivers the papers to me for the purpose of examining them. After examining the documents, I make my report to the Court of Examiners. In April, 1828, I received certain papers, purporting to be testimonials on behalf of the defendant, John Clapham. Among them was an affidavit, purporting to be made by him.

The affidavit was put in and read. It purported to be sworn before Mr. Laing, at the police-office, Hatton-Garden, in April, 1828. It described the defendant as a medical student, residing at No. 21, Oxendon-Street, Haymarket, and stated that, to the best of his knowledge and belief, he was twenty-one years of age.

Mr. Watson stated, that it was also required by the Court of Examiners, that candidates should sign a declaration. The defendant had signed such declaration, and therein described himself as of Thorney. He was afterwards examined by the Court of Examiners, on the faith of the testimonials produced, and a certificate was granted.

On cross-examination by Mr. Brougham (who, with Mr. Kelly, appeared for the defendant), the witness stated that it was usual to require a certificate of baptism; but no certificate had been required in this case.

Thomas S. Watson stated, that he knew the defendant, John Clapham, who was the son of William and Sarah Clapham, of Thorney, near Peterborough. Witness had known him since he was a week old. He lives at Thorney, and assists his father in his business of an apothecary.

An examined copy of the baptismal register was put in. It shewed the date of the baptism to be the 22d of August, 1809, and stated the birth to have taken place on the 3d of January, 1808.

Lord Tenterden.—We cannot take this as evidence of the birth: it only shews the time of baptism.

William Oliver (a short-hand writer) produced his notes of the trial of the cause, "*Cooper v. Wakley*," in the Court of King's Bench, on the 12th of December last, and read therefrom part of the defendant's examination. After stating in his examination-in-chief that he was a licentiate of the Apothecaries' Company, and was in practice with his father at Thorney, he stated, in answer to questions by Sir James Scarlett, that he was a pupil of St. George's Hospital,

and obtained a license from the Apothecaries' Company in the spring of that year (1828), on a false representation that he was then twenty-one years of age.

This was the case for the prosecution.

Mr. Brougham admitted that he could make no defence, and said he would reserve those topics which he had to urge in palliation for another place. The Apothecaries' Company, no doubt, did their duty in instituting such prosecutions as these, for the purpose of arresting a practice which had certainly been prevalent for some time past; but his learned friend, the Attorney-General, in eulogizing the object of the legislature, had forgotten that there was a very great hole in the act of parliament, for it allowed chemists and druggists to make up grouts without any certificate of qualification. He felt, however, that he should be wasting time were he to urge in this place any thing in mitigation of the defendant's conduct.

The Jury immediately returned a verdict of *Guilty*.

HOSPITAL REPORTS.

ST. BARTHOLOMEW'S HOSPITAL.

Lithotomy.

[MR. LAWRENCE, a few nights ago, made the following remarks on a case of lithotomy, at the conclusion of his surgical lecture.]

I wish to advert shortly to the case of a patient with stone, on whom I operated last Saturday, for the purpose of illustrating the way in which elderly persons, or rather those of debilitated habit and system, die after serious operations. This patient was 67 years of age, of feeble habit, and in a weak state of health. He had suffered three years from the stone, and had come to town for the purpose of having it removed. This was accordingly done, although the case could not but be regarded at the time as one of an unfavourable description; at all events, it might be looked upon as a chance whether the patient would live or not, and perhaps the unfavourable chance rather preponderated. However, the state of suffering in which a person lives in an affliction of this kind is so intense that I think it better to run the risk, and that is generally the sentiment of the patient himself. He lost, perhaps, about ten ounces of blood during the operation, a quantity which was certainly not very considerable. He was removed to bed, and I gave him two grains of crude opium. It is the practice in some places to administer opium after operations generally, but that is not my practice. In the case, however, of a patient like this, I consider that an opiate may be advantageously employed; so it turned out here, for the patient fell asleep soon after the operation,

and continued so for fourteen hours. When he awoke, he said he felt rather thirsty, and his pulse was found so feeble that it was necessary to give him wine and water. From that period to the time of his death, which happened yesterday evening, he continued gradually sinking. His pulse was generally feeble; his muscles were tremulous and starting; his voice was feeble, and he could only speak in a low whisper. The tongue was rather dry, with a brown streak over the middle. He employed the abdominal muscles in respiration: and there was not a symptom of inflammation going on. The urine passed by the wound, but not in the usual quantity, for in fact his state was such that the usual quantity of urine would not be secreted. In the course of yesterday a swelling took place at the posterior part of the pelvis—that part on which he lay in bed, apparently produced by the state of general debility. On examining the body, (the appearances of which may be summed up shortly), there was no kind of inflammation, nor any serious disease to account for death in any part. The peritoneum was perfectly free from inflammation; there was nothing like inflammation in the bladder, or in the cellular membrane around. All that we could observe was, that there appeared to be rather a deficient quantity of blood: this was observable especially in the right cavity of the heart, in which we usually find a considerable quantity. The kidneys were not in their natural state, but were pale; and the glandular structure was rather firmer than natural. The mucous membrane of the pelvis manifested no increase of vascularity. There was a slight concretion in one kidney, and a little purulent matter in the other.

Thus this person has died, as old persons frequently do, without any organ being materially affected, and without the existence of any visible disease to account for his death.

The following is a short note of the case above alluded to.

James Elprick, a short emaciated man, aged 67, was admitted into Darker's ward on Thursday, October 8, with symptoms of calculus in the bladder, which had existed about three years. It being the wish of Mr. Lawrence and Mr. Earle that the operation of crushing the stone should be had recourse to, the patient was brought into the operating theatre on the Saturday following at the usual hour, when Baron Heurteloup, after a careful examination, pronounced the present one an unfavourable case for the operation of lithotripsy, as the stone was of large size, and the bladder very small. The patient had also a large rupture in each groin, one of which had existed about ten years, the other about two.

17th.—The patient was again placed on the

operating table, when Mr. Lawrence extracted a large calculus by the lateral operation; during which about ten or twelve ounces of blood were lost from the division of the peroneal artery. After the patient had been removed to bed, two grains of crude opium were administered, when he soon dropped off into a sound sleep, which lasted fourteen hours. On waking he complained of slight thirst, but felt quite free from pain. The pulse being feeble, some wine and water was administered. Notwithstanding the free use of brandy and wine, he died last evening, apparently from general weakness, as no reaction whatever had been produced. His pulse continued weak; his muscles tremulous, as if he had no voluntary power over them; his voice became feeble, so that he could only speak in a whisper. His tongue was always rather dry, having a brown streak extending all the way along the middle line.

21st.—At half-past one o'clock to-day, Mr. Lawrence proceeded to examine the body, when no appearance whatever to account for death was observed. There was not the slightest appearance of inflammation in the abdomen, or in the bladder, or seen in the cellular substance surrounding it. The kidneys were rather paler than natural, and in one was found a little calculous matter. Less blood was found in the cavities of the heart, and in the large vessels, than is usually observed.

Our Hospital Reports this week have been *pushed* out, by the length of the Report from the Medico-Chirurgical Society, and by the account of the Trial at the Court of King's Bench.

LITERARY INTELLIGENCE.

Dr. Pring has in the press a work entitled "Sketches of Intellectual and Moral Relations," which, it is expected, will be ready for publication in the course of next month (Nov.)

BOOKS RECEIVED FOR REVIEW.

Notions of the Nature of Fever, and of Nervous Action. By William Forrester Bow, M.D.

Observations on the Laws of Mortality and Disease, and on the Principles of Life Insurance. By George Farren.

A Practical Treatise on Diseases of the Genitals of the Male. By John Maddox Titley, M.D.

London University Magazine, No. 1, Oct. 1829.

NOTICE.

Correspondents are particularly requested to take notice, that we cannot receive communications the postage of which is not paid.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
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OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 7, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE VI.

October 12th, 1829.

On Inflammation ;—Recapitulation—Causes.

I SPOKE to you, gentlemen, in my last lecture, of the varieties which the inflammatory process presents, according to the circumstances under which it takes place; and I fear that, in the attempt to conclude the subject within an hour—the period allotted—I may not have explained myself so fully on all points as I could have wished.

It is difficult, perhaps, to give an exact description of all the stages which are included between the first deviation from health and the worst effects that are produced by disease, but I endeavoured to enumerate them as follows. *Irritation*, in respect to internal organs, is evinced simply by an alteration in the functions of the part; and we cannot positively say whether, under certain disturbances, such an actual organic change is produced as to warrant us in calling it inflammation. But, in the external parts, we are often enabled to see recognizable changes of an inflammatory kind, accompanying slight alterations in the functions of the organ. Thus we observe distention in the external vessels of the eye; if it arise from a slight cause this state is transitory, and such as, of course, we should have no means of ascertaining if it took place in an internal organ. In explaining the stages of disease, we should call this state of irritation the first step in the deviation from health. We have besides *congestion*, or what is called determination of blood, a condition which is generally ascertainable

after death, for you can see a preternatural fulness of vessels in the organ: *hæmorrhage*—that is, a breach of some of the vessels of a part, in consequence of which blood is effused, making its appearance externally if it takes place on the surface of a membrane, having an external opening, or in internal parts if there be no external opening; effusion of *serum*, effusion of *lymph*, *suppuration*, *ulceration*, and *gangrene*. I think we must regard these various events only as different modifications of that disturbance which, when it has arisen to a certain degree, constitutes inflammation. We cannot say precisely that all these are simple differences in degree; we cannot, in that respect, compare them to each other, because we find that the difference of texture produces a tendency to one form of change rather than another, without our being able to say that the disease is comparatively more or less severe. *Hæmorrhage*, for example, takes place easily from the surface of a mucous membrane; but not from the surface of a serous membrane. We cannot actually determine whether the disturbance which produces this discharge in a mucous membrane is greater or less than that which produces coagulated lymph in a serous membrane;—if we say they differ in degree, we cannot venture to assert in which stage of its progress one is actually greater than the other, because there is a difference in the nature of the disturbance which we cannot precisely account for.

These are the more immediate effects of inflammation: under the head of remote consequences I have spoken of *induration*, or that kind of thickening and increased hardness in a part which more or less interferes with the functions permanently, and which is opposed to another termination which occasionally takes place—that of preternatural *softening*; a change which is observed especially in the brain. With respect to induration, it exhibits itself in two forms. In the majority of organs, the indu-

ration is of a white kind—that is, the substance that is indurated does not possess a great number of blood-vessels, therefore it is a whitish change in the structure of the part; but in certain organs which possess an abundant supply of vessels, and where there are numerous capillaries, this induration is of a more or less red colour. This is observed in the lungs, liver, and certain other parts; and in the case of the lungs, where it is common, is, by the French, called *hepatization*, because it produces a change in their substance; which, in point of colour, sensibly approximates to that of the liver. I should also have spoken to you, in my last lecture, of the varieties which inflammation presents in the several textures of the body. When you are informed that inflammation is an augmented action of the vessels of a part; when you learn that the seat of inflammation is in the capillaries; when you know, at the same time, that the arrangement of these vessels presents a difference in each organ—you will naturally be prepared to conclude that the inflammatory process will have its peculiar characters in each structure; that there will be something particular that will distinguish the process, in every part in which it occurs.

There are certain leading characters, which we have already pointed out, which are more or less perceptible in all parts of the body; but yet, in each texture and in each organ, there are particular phenomena which distinguish their inflammation from that of any other part.

Suppose we take the membranes, either altogether, or the parts which resemble each other considerably: you find in each division that inflammation exhibits a distinct character. In the mucous membranes, inflammation is characterized by a great distention of the blood-vessels, with which their surface is very largely supplied; and thus a bright scarlet redness is one of the characters of this action in them. Swelling, and increased thickness of the inflamed texture, is another character. An increase in the quantity, and an alteration in the quality of the fluid which these membranes naturally separate from the blood, is a third character; and the fluid so increased in quantity and so changed in the appearance it presents, chiefly characterizes the stages of the disease. Such are the circumstances that particularly mark inflammation of the mucous membranes. If, now, we turn to the serous membranes, we find that the disease there is of a different character. In serous membranes there is no perceptible swelling, nor increased thickness; there is in general no increased redness, or scarcely any that is perceptible. If you fancied that in the case of an inflamed

peritoneum you saw an augmented redness of the surface, you would, perhaps, find that it was produced by a distention of the vessels that are seated beneath it; and if you were to detach the serous membrane from the parts over which it lies, you would probably find no increase in the vessels that actually belonged to it. Increased exhalation on the surface, and a conversion of the fluid subsequently into one that cannot be distinguished from pus—and farther, the deposition on the surface of coagulable lymph; these are circumstances which characterize inflammation of the serous membranes. The coagulated lymph thus deposited becoming subsequently organized, constitutes the material of preternatural adhesions; forms *adventitious membranes*—that is, a new substance covering the surface of the parts. These depositions on the surface of serous membrane give to it, in many instances, the appearance of being increased in bulk; but if you remove the adventitious formation, you find that the original textures are not increased in thickness. Now, as there is a great and essential distinction in the characters and products of inflammation in these two membranes, you scarcely can, by any artificial means, produce in one what takes place in the other. Mr. Hunter tried, by applying powerful external irritants, to produce in the mucous membranes the same effusion of coagulated lymph which occurs in the serous membranes; but he could not succeed. You will immediately foresee, when you reflect on the organs to which the serous and mucous membranes respectively belong, that if the latter were liable to the same abundant deposition of coagulable lymph, and to preternatural adhesion from false membranes, like the former, the functions of the parts would be completely destroyed. Consider the state of the stomach, and other portions of the alimentary canal: those tubes would be blocked up by such depositions. Thus you see why inflammation has one kind of termination and effect in one case, and not in another: at all events, such is the fact. As to the fibrous membranes, in inflammation of the dura mater you do not perceive effusion of lymph, or the secretion of fluid like pus; but there is an interstitial deposition—a thickening of the part.

All the textures of the body, when injured, wounded, or divided, will inflame; but when we speak of the inflammations that arise in the various organs of the body, from *internal causes*, and not from *external injuries*, we find there is a great difference in respect to the tendency and the effect of the diseased action. The cellular membrane is particularly prone to suppuration, and there it takes place very easily;

but the glandular structures of the body are by no means easily brought into this state. In many of them we hardly know an instance in which suppuration takes place. I fancy it has happened to few persons to see an abscess in the kidney or spleen; and in these climates it is rare to see it take place in the liver. The testicle is an external part, and is frequently the seat of inflammation; and yet suppuration in the testicle is very rare. Suppuration is hardly ever seen originating in spontaneous inflammations, or those that arise from internal causes in the substance of the muscles, or in the substance of the tunics of the stomach, or other parts of the alimentary canal. Mortification takes place easily in the cellular membrane; and this is the texture in which this alteration is most frequently observed, and in which it occurs most quickly. Mortification takes place frequently in the external parts generally, but it is a very rare occurrence in the internal organs.

I now come to speak of the *causes of inflammation*; and these include all circumstances that can act on the human body.

I have already mentioned that the great majority of diseases are inflammatory; therefore you will be prepared to find that the various causes which act on the human frame are in general capable of exciting inflammation. In the first place, inflammation is excited by all kind of injuries, whether *mechanical*, *chemical*, or of a *mixed* nature. Inflammation is the consequence of wounds, whether they be incised, lacerated, or contused: it is consequent, therefore, upon surgical operations. It is produced by pressure on the body, whether it be exerted externally or take place from internal causes, such as distention from the growth of tumors, or aneurism. Inflammation is produced by the application of heat; by the application of strong acids or pure alkalis; by various metallic salts, and by numerous acrid substances, whether they belong to the class of chemical agents, or be of animal or vegetable origin. Under the class of animal substances we may include what are called morbid poisons. Active inflammation is produced by the bites and stings of particular insects; by those of venomous serpents; and by those of rabid animals—a description of injury that may be called of the morbid kind. Inflammation is produced by the application to the body of cold and moisture, and by various other atmospheric changes, the nature of which we cannot, in all instances, exactly appreciate: though we find that such influences are capable of producing this action in the parts with which they come in contact. Under certain circumstances, cold air, particularly if it is combined with

moisture, will produce inflammation of the eye. The same kind of cause, immediately applied to the mucous membranes of the nose, the throat, the trachea, and the air passages of the lungs, will cause inflammation of those parts. Again, the application of cold and moisture to the skin—the external part of the body—is capable of producing inflammation in some internal parts, or in some one remote from the seat of direct application. Thus, if a person gets wet feet, he may thereby have an attack of catarrh, of sore throat, or of rheumatism. Cold and moisture, and various other atmospheric conditions, are capable of inflaming *directly* the parts to which they are applied, or *indirectly* the internal and comparatively remote parts of the body. Again, the organs may become inflamed in consequence of excessive exertion in the execution of their natural functions: thus, if the eye be employed beyond a certain extent, if it be exerted to a great degree in the observation of minute objects, if it be used for a great number of hours, inflammation may be produced in it. Excessive mental exertion will cause a disorder in the head, in the same way that the stomach, or other parts of the alimentary canal, the lungs, or the various other organs, may be the immediate seat of inflammation in consequence of unnatural exertion in the execution of their ordinary functions.

With respect to the causes of inflammation that I have now mentioned, they admit of being divided into two classes. Some of them, such as external injuries, or the application of certain chemical substances or morbid animal poisons, will produce inflammation in some degree; it may be more, or it may be less—but inflammation in some degree is the necessary result of their application. Suppose we take the case of *surgical operations*. If a surgical operation be performed on a person who is carefully prepared for it, and in other respects healthy, a slight degree only of inflammation will be consequent upon it; but if the individual should be unhealthy at the time of the operation, or if no means be taken to place him under circumstances favourable to its performance, considerable inflammation will be produced. If you extract a cataract from an individual who is in an healthy state of body, and whom you have carefully prepared for it, perhaps you will have hardly any perceptible inflammation; but if the operation is performed upon a person of gross habit, it is very probable that active inflammation of the iris will result. If an operation is performed on an individual in whom plethora is manifest, without means being taken to prepare him for it, such inflammation may be produced as shall entirely frustrate our object.

With respect to other causes—that is, the application of cold and moisture, or the excessive exertion of the organ itself—they do not act invariably so as to produce inflammation, but they do so under certain circumstances. A considerable number of individuals may be exposed to the action of either cause, and in many of them no kind of apparent result takes place—but still a certain proportion of them suffer from it. For instance: you may have a considerable number of persons exposed to cold, wind, rain, or snow, and the greater number of these shall not suffer any injurious consequences at all; but, perhaps, one out of the number may have a sore-throat produced, another may have an attack of catarrh, a third of rheumatism. A number of persons may sit down to a feast, and perhaps only one individual out of the whole will experience an attack of apoplexy, or palsy. A person who is in good health receives a slight blow on the foot, or a slight twist of the ankle, and, with the exception of the temporary inconvenience that is produced, he experiences no further injury; but if either of these circumstances happen to a person of gross habit, he, perhaps, has an attack of the gout brought on in the part.

Thus we have to consider, not merely the causes that are applied, but also the state of the individual to whom the application is made; and this brings us back to the distinction that I have already had occasion to mention, between the direct, immediate, or exciting causes of inflammation, and those which are remote or predisposing. The exciting causes, in many cases, will not produce disease unless the individual has been prepared for their action by the influence which is produced by the predisposing causes.

Now, under the head of remote or predisposing causes of inflammation, or disease of any kind, we must enumerate, in the first instance, the natural peculiarity of the organs which belong to the individual.

All mankind are not constructed alike. There are differences in their organs; there are consequent differences in the manner in which the functions are executed by those organs; and hence a state of health, which is merely a general expression of the combined result of the actions of all the organs, will present a variety in each individual. If we look throughout the whole of the works of nature, we see that it appears to be her object every where to produce variety. Nature, if we may personify her, seems to have nothing like what we may call the *quakerish* taste; she seems not to delight in a uniformity of colour or shape; she does not appear to have any idea of cutting out all mankind by one pattern. There are, in fact, numerous varieties in respect to organization and to function: in the first place, varieties which are common

to a considerable number of individuals; which therefore admit of being arranged and classed by names; and which varieties constitute the difference which physiologists have denominated *temperament*, or constitution. It is the predominancy of particular actions or sympathies of the organs, in certain individuals, that constitute the sanguineous, the nervous, the lymphatic, and the chylopoietic temperaments. In the first, the circulating system; in the second, the nervous system; in the third, the absorbent; and in the fourth, the alimentary or digestive system, seems to be predominant, or to bear the leading character in the organization. These differences in the temperament, or constitution, have been recognized from the remotest times, and no doubt they are found in nature.

There are, then, certain *general* differences which are common to a number of individuals; and there are certain *peculiar* differences which belong to each part and person; these last are called *idiosyncracies*. This is a Greek term, which means peculiar mixture, as if it denoted the particular proportions in which the various organic elements are combined in each individual. Now we find, in point of fact, that there is something peculiar in the constitution and bodily character of every one. We see this particularly marked by the effects which certain external agents produce on each individual. We observe that particular medicines, or particular kinds of food, produce certain effects on some individuals that they do not on others. There are some persons in whom it is difficult to affect the system with mercury; there are others, in whom a blue pill, or a small dose of calomel, will produce violent salivation; and there are a variety of other differences of the same kind.

Another law of nature is, that organized beings produce, by generation, new beings like themselves, otherwise species and races would not be preserved: and this law, by which the progeny partakes of the character of the parents that give birth to it, extends to the diversities I have just mentioned—the difference of temperament, and sometimes the individual difference;—and thus it happens that the temperament and disposition to certain diseases, are inherited and run, in different families, just like particular forms of the features.

We come in the next place, in considering the circumstances which give a predisposition to certain diseases, to consider what are called *morbid* dispositions. The different temperaments are, as it were, *natural* dispositions; but there are *morbid* dispositions, and these approach nearer to a state of disease than the diversities that I have just mentioned, yet it would not be very easy to draw a line of distinction between them and those differences which constitute the varieties of temperament. As examples

of morbid disposition, I may mention scrofula, gout, and rheumatism. These, in some persons, depend merely on the original nature of the constitution, which is termed hereditary; but, in others, they consist in certain states of the frame which may be produced by external agents, in individuals that are supposed to be born healthy. Morbid dispositions are, therefore, *hereditary* or *acquired*. To such dispositions the technical name of *diathesis* is sometimes applied: thus we have the scrofulous, gouty, and rheumatic diatheses.

Age and sex, in some instances, give a particular form to disease; and climate and situation have certainly a marked influence upon it. Great atmospheric temperature disposes to inflammatory affections, particularly of the skin: thus, erysipelas is of common occurrence, and it is serious in its nature in hot countries. The liver is particularly liable to be affected by a high degree of atmospheric temperature, and abscesses, as the consequence of inflammation, are common occurrences in those parts of the world where the climate is hot;—nothing is more common than those affections in Europeans who visit the East and West Indies. The yellow fever, a dreadful scourge in the latter country, manifestly owes its origin to the effect of a high degree of heat on the system; in fact, the degree to which the liver participates is evinced by the name *yellow fever*, a name derived from the tint of the skin consequent on the biliary secretion.

I have thus far considered inflammation as the result of causes acting solely on the parts that are the seat of such disorder; that is, I have considered what we may call incidental inflammation—inflammation that occurs exclusively from causes that are immediately applied to the organs. But, in many instances, we cannot trace the application of any cause to the organ that is the seat of disease. This happens in a great number of internal inflammations, and also in several external ones, and these cases are called *spontaneous* inflammation. We do not mean to assert that inflammation actually occurs of itself; we do not mean to say that the effect of inflammation takes place without an adequate cause; we only denote by this term that the effect is produced without any ascertainable cause. Thus we frequently observe in children that inflammation of the brain takes place, leading to an effusion of water in the ventricles, which is called *hydrocephalus*. We see inflammation of the pia mater supervening, and producing various affections of the head, and frequently mental aberration. We may have inflammation of the liver or other viscera, erysipelas, inflammation of the synovial membranes, or joints generally. Thus you may have inflammatory affections either of the internal or external or-

gans, arising where you cannot actually trace the application to the organ of any cause capable of inducing disease; and hence we establish the head or division of *spontaneous* inflammation in contradistinction to that of *accidental* inflammation, which includes those where you can observe a cause immediately applied to the part.

Now, although we cannot in many of these cases trace the application of any local cause to the seat of disease, we can often discern the remote or predisposing causes which we may consider to have an influence in determining its occurrence, and we find that these predisposing circumstances are also equally capable of leading to the occurrence of incidental inflammation, but do not necessarily produce it, except under certain circumstances.

The most powerful and most general of the remote causes of inflammation, whether we consider the spontaneous or incidental form of the disease, undoubtedly is what is understood, in common language, by fulness of habit, or what is technically called, general plethora of the system; that is, an unhealthy condition produced by taking into the body an excessive quantity of new materials, in consequence of indulgence in the pleasures of the table, either by eating or drinking too freely. The natural supply of the frame requires that a certain quantity of new material should be introduced into it. Persons, however, are in the habit of consuming, perhaps, two or three times the quantity that the natural wants of the economy require, and hence arises a state of repletion. The digestive organs are overloaded, and an unnatural state of fulness occurs in the sanguiferous system which receives the aliment prepared by the digestive organs. In point of diet, most persons err alike in quantity and quality, and both of these seem to take place chiefly in two articles, that is, in animal food and in fermented liquors. It is, perhaps, difficult to determine what is the *minimum* of supply which will keep the body in a healthy state; but we have facts from which we conclude that a much smaller quantity is sufficient for the purpose than persons are ordinarily in the habit of taking. There is a very celebrated example, that has often been quoted, and many times in this theatre,—that of a Venetian nobleman, named Cornaro, a person who, having been in the habit of indulging in the way alluded to, when he arrived at the age of forty fell into a very bad state of health. Having invoked the aid of physicians in vain, he took his case into his own hands, and determined to try what he could do by abstinence. He found it relieve him, and, persevering in a rigid system of temperance, he in a comparatively short time, got rid of all the complaints that he had been previously troubled with. He steadily pursued this plan, and

he attained to the age of upwards of 100 years, leading a very active life, and in the full enjoyment of all his powers, bodily and mental, filling an important office in the state, and being, in fact, a character of considerable influence in Venice. He has left behind him a small book, in which he mentions the circumstance that I have now recited. He states that he enjoyed his bodily and mental vigour on a diet which included only twelve ounces of solid food, and fourteen ounces of liquid, *per diem*: that would be four ounces of solid food taken three times a-day. He states that this system of abstinence was so necessary to his health, that when he exceeded his usual allowance, so as to take fourteen ounces of food, instead of twelve, he became hot and feverish, and felt such unpleasant effects, as shewed him the necessity of going back to his former quantity.

I was very well acquainted with a lady who enjoyed remarkable health through a long life. She was the mother of a numerous family, and was always robust and hearty; capable of taking exercise and enjoying rest, although she lived a very temperate life, never allowing herself under any circumstance more than a single glass of wine, and taking about one half the quantity of food that persons ordinarily do. She was occasionally the subject of slight attacks of an inflammatory nature, sometimes of erysipelas in the face. At rather an advanced period of life she had an attack of determination of blood to the head, which required an active system of abstinence for a considerable time. This proves that the quantity of animal food and fermented liquor in which people commonly indulge, and which they suppose is necessary to health, is not so, as may be shown by a variety of facts. I was myself acquainted with a lady who, from a kind of whim, began to restrict herself to vegetable diet. She was in good health, and it was not at all necessary for her to give up her ordinary habits; but she took a fancy to live upon vegetables and distilled water, and I believe she took no kind of aliment beside, except milk, for several years. I never knew a lady who possessed more considerable bodily powers than she did: she made nothing of a walk of ten miles, and *could* walk twenty; though she was a slight little woman. She bore two or three children, and suckled them for the space of twelve months, during which time she took only what I have mentioned—vegetables and fruit to eat, and distilled water to drink, taking nothing stronger than tea, or tea mixed with milk; yet they were fine healthy children.

Now in London we have opportunities of observing the effect of habits directly the reverse of these. The persons who follow a laborious occupation in this metropolis—the porters, coal-heavers, draymen, and a

variety of others, eat and drink most unmercifully. A great number of them pass through this hospital, so that we have opportunities of ascertaining their habits, and of seeing the effects they produce. As to two or three pots of porter, that is quite a moderate quantity. You would hardly believe that many of these persons go to the extent of eight, ten, or twelve quarts of porter in a day, filling up the interstices with glasses of gin; and take a meal of strong animal food that would be quite surprising. Now these are the description of individuals that are really, by their natural constitution, formed for strength, and for long life. They are the strongest and most hearty men that come from the country, and who, if they lived carefully, might all of them reach old age, with perfect possession of their bodily and mental powers; but they very seldom arrive at all near it. We see a great many of them here in consequence of their habits of life—that is, in consequence of their state of repletion. They are the subjects of inflammation of the internal organs; inflammation of the liver, of the stomach, of the lungs, and of the heart; they go on till they lay the foundation of organic changes; and thus most of these men, if not all of them, are either cut off in consequence of some accidental injury or violence, which speedily leads to the most severe inflammation; or they die of dropsy before the age of 50.

I remember being called to a fine stout young fellow, one of Whitbread's draymen, who was under 30, and quite a picture as to symmetry. He had merely scratched his leg against the iron hoop of a butt; he did not think much of the accident, and went about his occupation as usual; his leg became painful, and this mere graze of the skin soon began to be troublesome, and within 48 hours of the time he met with the accident I saw him. At that time the whole of the leg and thigh was swelled, livid, black, and blue, up to the body, merely from the occurrence of a slight accident. Now you will easily understand that the effects which are produced by any erroneous system of diet must be very considerable, for the causes of disease are here applied constantly, and persons are subjected to their action day after day, year after year. When you make inquiry into a person's habits of life, he tells you that he is temperate—that he only takes three or four glasses of wine a day; and three or four glasses look like a trifling quantity. But you must multiply this by 365, and then you see the enormous quantity of alcohol that goes into his stomach in the course of a year. This state of unnatural repletion, in the first instance, seems to be attended with rather an increase of health and strength, and the person feels robust and well; all the organs act power-

tally, and a high state of health appears to be produced. But after a certain length of time a condition of body results that approaches to disease; there is a fulness of pulse—a preternatural fulness; there is a disposition to heat and thirst on any exertion; in fact, a state is produced that closely borders on disease; and though you cannot actually say that the individual is diseased, yet he is on the very borders of it: a very slight impulse destroys the balance, and he passes into a state of *plethora*. In this case the accuracy of the expression has been doubted, and it has been questioned whether there is, in fact, real plethora: it is difficult to determine whether it is so or not. In fact, we do not know what the natural, regular, or normal quantity of blood in a particular individual is—we cannot say how much blood there is in a person naturally; therefore we want terms of comparison. You will find in many that there is an unnatural fulness and strength of pulse; and that there is frequently heat of the body, or at least this is produced by slight exertion. We often find, when we bleed these individuals, that the blood presents the appearance which characterises that drawn from those actually labouring under inflammation. Such persons are in a state very similar to that of females in whom the catamenia have been suspended, where we see flushing of the countenance, pain in the head, and a state of fulness in the vessels of various parts. The same symptoms are seen in patients in whom large ulcerations have been rapidly healed. For my own part I am inclined to believe that there is an unnatural quantity of blood in such persons, and that the expression of plethora is literally correct.

I remember a person who came under my care with a cataract, for the purpose of undergoing the operation. He was a man about forty years of age. When I asked him how he was, he replied, "very well—in perfect health;" but he had an enormous head, with a particularly large face, which was of a sort of deep-brownish red, or livid colour. In fact, the appearances were such as to indicate a state of the capillary circulation that I did not like to see in an individual who was to undergo an operation of this kind. This led me to investigate into his previous mode of living: I found that he had been in the habit of taking an inordinate quantity of animal food, and an equal proportion of fermented liquors. When I came to examine his pulse, I found that it was full, strong, and hard, and there were other circumstances with regard to his tongue and digestive organs which, although he said they were in a perfectly healthy state, proved to me that it was far otherwise; and I felt certain that if I performed the operation, inflammation of a destructive kind would be the unavoidable result. I did not operate for ten days, or

perhaps a fortnight, from the period of seeing him, and in the course of that time I took from him 120 ounces of blood; nor did I think it safe to operate until I had done so. Now, I conceive, that this was a larger quantity than I could have taken with advantage, had there not been more in his veins than natural. With this depletion were combined the daily use of purgatives, and restriction from all animal food and fermented liquor, his diet being confined to gruel and broth. At the end of the time he was another man to what he had been at the commencement: thus I brought him to the point at which I thought the operation could be safely performed, and it so turned out; in fact, I never saw one succeed more completely.

At our next meeting I shall proceed to consider the forms of inflammation which are produced sympathetically.

CLINICAL LECTURE

UPON

CANCER OF THE MAMMA,

BY CHARLES BELL, Esq.

Professor of Surgery in the University of London,
and Surgeon of the Middlesex Hospital.

GENTLEMEN,

ON the subject of cancer, I may preserve something more of system than belongs to clinical lectures, at the same time that you may reap all the advantages of this mode of teaching. The number and diversity of cases now in the hospital, enable us to select what subject we choose for discussion. Besides the different stages of cancer of the mamma that we may see in the ward set apart for that disease, we have cancer of the labium and os externum; we have cases of cancer of the uterus; we have that disease which is called cancer of the lip; we have a disease of a different kind destroying the nose—in another, the whole face is carried away; what is more uncommon, we have cancer in the hand, to be operated on the moment the person will consent,—and we have another instance of the same disease in the hand, in a patient just admitted. I must notice also a patient just gone out, who had a cancer of the penis, which I thought was not a proper case for operation. I last night put into

your hands a specimen of the scirrhus contracted rectum, which truly is a cancerous disease, from a poor woman whose sufferings you witnessed in the latter stage of the complaint. These are surely sufficient to convince you of the necessity of attending to this class of diseases, since you could not thus see in one view so many of them, unless they were of very frequent occurrence. I shall not say a word to move your compassion, and in that way to draw your attention, since you daily accompany me through this scene of misery, and the newness of the painful impressions must excite in you—feelings which are almost worn out in me by repetition. It is to the diseases of the mamma now in the hospital that I shall first direct your attention.

Elizabeth Haggard, in Handel's ward, 30 years of age, complains of pain seated in the left mamma. This is a case to which I must demand your attention, lest hereafter, through ignorance, you should place yourselves in circumstances which may affect, not only your professional reputation, but your character for truth. You observe the countenance of this young woman, young in respect to the individuals with whom we have to contrast her; there is here obviously ill health; and, although the breast presents no mark of disease, I believe that she has grounds for her complaints. In short, it is an instance of the sympathetic pain in the breast, occurring when there is no real disease there. These pains in the breast have two sources. The first arise in consequence of change in the womb—of uterine irritation. You recognise them, if depending on the effort of menstruation, by their periodical return, and by swelling and tenderness of the mammae accompanying them. But internal complaints are another source of pain in the mammae; such as disordered digestion; disease of the lungs; and even, as I could prove to you, disease of the heart. Sometimes these pains affect the mammae, shoulder, and elbow, and then the intelligent practitioner recognizes them as being sympathetic. But when they are concentrated in one of the mammae, he is apt to believe that there is actual disease there; and I have had instances in private practice during the present season, where the patients have placed my fin-

ger upon a gibbosity of the cartilages of the ribs, conceiving that this was a tumor of the breast, and they have referred all their sufferings to that. It is now some years ago since a young married lady consulted me; and whilst I undid a roller of eleven yards in length, which was bound round her chest and her arm, I expected at least some abscess or ulcer; but the nipple was prominent, the breast was full and natural, and had not even a *kernel* in it. "What then, madam," said I, "tempted you to undergo this restraint?" She said she had been told by her medical attendant that there was a latent disposition to cancer in her breast: "And you believed him?" "Not altogether from what he said," she answered, "but because of the pain which I feel in it." It was one of these cases of sympathetic pain. This instance occurred during that short period when the regular part of the profession was assailed with the assertion, to which all good-natured people were disposed to assent—that firm compression would cure cancer. The same notion seems now to be entertained in Paris. I have within these five days had a patient direct from Paris, where this system of bandaging had been employed. As I undid the bandaging, and drew the roller towards me, the lady turned round and round so long, that I thought she must at length acquire the spinning motion of a French top. There was no disease in this lady's breast, but there *had been*.

But we must not dismiss this subject of rolling with ridicule. You know its importance in abscess, sinus, and ulcer. Out of any dozen common surgical patients now in the hospital, with ulcer of the lip, or in the ankle, or sinus in the groin, &c. ten of these are profiting by rest and bandage. It is always possible by compression to exhibit in a case of neglected cancerous mamma a remarkable seeming advantage; and actually, in many cases, to do great good. But we shall return to this subject. Let me just remind you that when there is pain in the mamma, you first direct your attention to the condition of menstruation, and secondly, to the state of digestion, or complaints in the chest. This young woman was dismissed with a pill of rhubarb, ipecacuanha, and a little of the blue pill; and she has a powder of columba root, magnesia, and some aromatic; with an anodyne liniment,

which last is yielding to her prejudices rather than strictly conforming to the views which I have just given you.

But before leaving this subject, I shall give you an instance of the wide extent of survey, if I might say so, which you must make in the practice of your profession. I went to see a lady, whose family had grown up, and whom I found very much alarmed by a pain in the mamma. I satisfied myself that there was no actual disease there; but finding her muffled up about the throat, and breathing with a wheezing noise, I entreated to be informed what was the matter with her throat. She then showed me, which she had not intended to do, a brouchocele of very formidable dimensions. I found that it tightened her breathing very much; that she suffered in the night, and was obliged to sit up in bed; and that it was at that time principally she felt alarm from pain in the mamma. Here then you have a disease of the thyroid gland, disturbing the action of the lungs, and that again producing pain externally in the chest, and referable to the mamma.

Mary White, æt. 57. In the hurry of the receiving-room on a Tuesday, this woman was taken into the hospital for extirpation of the mamma; and now you will please to follow the reasons expressed, on consultation, against the operation in this case. There is a scirrhous tumor occupying the mamma, and the nipple is slightly drawn in. These appearances, in addition to the woman's age, are decisive as to the character of the disease; and our duty would be to extirpate the whole breast, were this all: but, on examining the axilla, there is a knot of glands there. When you find this to be the case, your business is, in the next place, to consider whether such tumefaction of the glands has arisen from any thing in the practice of the surgeon, or if it has come on in the progress of the disease. You do not find, in this case, that there has been any application of leeches, blisters, or rubefacients, such as sometimes cause irritation and swelling of the lymphatic glands in the axilla: the inference therefore is, that these have come in consequence of the disease of the mamma itself. Observing these swellings, the next step in the consultation was, to inquire if the disease had gone further; for if it had not, the consultants might still have determined that the extirpation of the

mamma should be performed, and the glands of the axilla be taken out. But you perceive that it has proceeded further; for as soon as the finger is placed above the middle of the clavicle, we feel commencing disease in the glands there. Lastly, on examining the left breast, there is a suspicious hardness in it. The question, therefore, is decided: the *extirpation* of the disease in this woman is a thing impossible. But there is a question of extreme difficulty to be determined—"Ought we to operate when we cannot extirpate the disease?"

To comprehend this question, reflect upon the condition of Mrs. —, who occasionally comes to us as an out-patient. She was in the hospital last Thursday. It is now six years since I operated upon this woman. The case was considered unfavourable: it was the true carcinoma mammæ, and the glands in the axilla were suspected to have taken on them the disease. The wound healed kindly and rapidly; and the case went on very well till about nine months after the operation, when she shewed me the eschar, with a hardness commencing on the upper edge. This yielded to a liniment of the tincture of iodine, and the eschar became smooth; but next year, a tumor began to shew itself in the axilla. If we can say that its progress was retarded by the application of the same remedy, it is all that we can boast of. It is even now a small tumor, and is certainly not the cause either of her ill looks or of her distress in breathing. Her condition now is desperate; she is pale and emaciated, and cannot lay her head down in bed. She is in the last stage of the complaint, with, I fear, effusion into the chest.

It will illustrate this subject if you turn to the report of the dissection of Mrs. J. This woman had also been operated on; and, if we revert to the case-book, we shall see with remarkable success; but she returned upon us with tubercles near the cicatrix, and conscious of her situation; in a few days she died. On examining the body there was effusion in both cavities of the chest, and various cancerous tubercles in the serous covering of the lungs.

Now, gentlemen, these are not cases to win the public attention and exalt the surgeon, but they convey to you the simple truth. Observe, I speak

now of the proper carcinoma mammae, the small hard tumor of the breast, with retracted nipple: this disease we cannot extirpate. We are brought back, then, to our question,—Ought we to operate even although we cannot eradicate the disease? or rather I should express it, *Ought we to operate where there is no possibility of eradicating the complaint, but where we secure a certain advantage by removing a mass of external disease, which is the great source of misery?*

To understand the extent of this advantage, from merely taking away the breast, although the disposition, or even the actual disease, remains internally, look to the condition of Mrs. Malony. She is a sensible woman, and bears up wonderfully against her misfortune. I shall by-and-by state to you the peculiarities of her case, but her present condition is enough for my argument just now. There is an immense chasm in the breast, discharging plentifully, and subject to occasional increase of pain. The discharge and sloughing are offensive to her own nostrils, as you may see by the scent-bottle in her hand. Now, only conceive such a patient in the midst of a private family.—Not to speak of the sufferings of relatives, but only of the patient's, are not her's greatly increased by the pain she gives to others? Here, then, we see the advantages of extirpation; that, although the disease be only checked in its progress on the constitution, yet, by the removal of the external disease, we save our patient from that state of aggravated suffering—the offensive sore—the continued necessity of surgical attendance; and above all, we save her from that mental suffering which is the necessary consequence of a female knowing herself to be offensive to her kindest friends and relatives; and the reflection that, in dying, she leaves an impression so painful as to excite disgust in her friends.

This patient is 48 years of age; and she has now been in the hospital for more than a year. It is about four years since she first perceived a small lump in her right breast, but this was not attended with any uneasiness for some time. In the course of two years, however, it increased in size, became greatly larger than the natural breast, and at length burst, giving vent to a foul sanious discharge. When she

came to the hospital the tumor occupied nearly the entire space from her shoulder to the pit of the stomach: it was elevated, with lobules which were of a purplish blue colour; it had a large chasm in the centre; the edges were everted and again coiled in, and the discharge offensive. The tumor, at one time, was reduced in size in a remarkable manner, its deep purple colour was gone, and the edges of the cavity appeared to be closing, as if they were about to unite: but this condition lasted only for a short period; the tumor speedily developed itself again; and it has continued for some months, with occasional variations, of the same dimensions which you now see.

As I have gone round the ward I have put the questions to this woman in a form to be intelligible to you, and you have heard what her own experience has dictated. The swelling is great, the discharge very abundant, and the disposition to slough has been shewn on some of our visits; whilst on the following she will express herself as much better, relieved of her pain, and we find the tumefaction and inflammation have subsided. It is our business to understand this. The source of this occasional distress must be a principal reason of the continuance of the disease. You have heard her own narration. She is not past the age of menstruation, and the period of the return of the catamenia is that of her most aggravated suffering. If, therefore, we are to attempt to prevent these occasional attacks, we must watch for the time of the return of the menses, and anticipate them by leeches to the hæmorrhoidal vessels, tepid and anodyne injections to the vagina, by the hip-bath, and the union of camphor and opium in pill or as a draught. In short, suppose that I have repeated all that Mr. Abernethy could say on the necessity of attending to the operations of the stomach; and I would add, as the next best thing, attention to the uterine system.

I shall here give you a rapid sketch of the proofs of sympathy between the uterus and the mammae, for indeed it is a matter of consequence for you to attend to this; and were I disposed to be critical, I might say that this subject has been strangely neglected in publications upon this part of practice. You will observe that the first appearance of the menses is attended with uneasiness

and swelling of the breasts; and that on each return of the period, there is the same sympathy shown in the tenderness of the mammæ. Upon conception too, in the state of gestation, and on delivery, there are the most decided changes taking place in the mammæ, in connexion with the womb; and when the uterine system is about to suffer that final change which occurs in the climacteric period of life, the breasts suffer as in all the other changes to which the uterus is subject. In a delicate girl, before puberty, you see the constitution holding out pretty well; but when the uterine change is about to produce that influence both on body and mind which characterises the sex, we often see that the constitution suffers a severe revolution: paleness, languor, and hysterical irritability, are succeeded by pains in the side, short cough, morning expectoration, and consumption. At the cessation of menstruation, a disturbance not less remarkable is exhibited: the plump matronly appearance of the patient is changed for a look of ill health, with sallowness and thinness; she complains of pains in the loins and limbs, like rheumatism; and when an investigation is made into her condition, you find that menstruation has been interrupted—that it has returned after a prolonged interval, not in a kindly manner, but, on the contrary, with pain, difficulty, and unusual discharge, and with actual clots. In this manner the periods have become irregular, and the returns attended with violent symptoms. In the meantime the mammæ are swollen up: on their subsiding, a small kernel is felt, deep in the gland, and this does not subside, but remaining dormant for a time, waits, as it were, for an additional excitement from the same cause to develop itself. We might look to the records of the cases in the hospital, and we should find, that when a young woman, from 18 to 25, has such tumors forming in the mammæ, they partake of the disposition that prevails in the constitution—they are strumous; but when they occur from the causes assigned in a woman from 39 to 50, they are more particularly alarming, because it is the period of life in which a glandular structure, being deranged, is apt to run into carcinoma.

[To be continued.]

ON THE FUNCTIONS
OF THE
LABYRINTH OF THE EAR.

By J. SWAN, Esq.

(For the London Medical Gazette.)

In a preceding paper I stated that hearing in the mammalia was produced both through an impulse given to the labyrinth by the ossicula, and a modified one to the membrane covering the finistra rotunda; so that particular sounds were heard through one of these parts, and not through the other, as I could not conceive that the membrane of the fenestra rotunda existed only for modifying the undulations conveyed through the labyrinth from the ossicula.

If the fenestra rotunda in the mammalia alone be examined, it may be concluded that it exists almost entirely for this purpose; but as the different formation of the labyrinth of birds may appear to invalidate this opinion, I will endeavour to give such an explanation as may tend to reconcile the seeming contradiction offered by this variation.

In birds, the cochlea is not formed as in the mammalia, with the fine internal texture of the lamina spiralis; but is a cavity containing a pulp or thick membrane, on which the auditory nerve is spread. The fenestra rotunda opens into the vestibule, and communicates indirectly with the cochlea by a small aperture, which indeed rather leads to the vestibule than the fenestra rotunda. The slender bone attached to the membrana tympani is observed to pass into a canal, which leads to its insertion at the fenestra ovalis, and the entrance to this seems ill calculated for receiving undulations from the different parts of the tympanum, and conveying them to the fenestra rotunda.

If the fenestra rotunda in birds does not communicate with the cochlea in the same manner, and the cochlea be not divided into two scalæ as in the mammalia, I presume it may be concluded that the scala tympani in the mammalia is formed principally for receiving such impressions from sound as do not act on the fenestra ovalis through the ossicula; for in birds the situation of the fenestra rotunda precludes this action, except in a very limited degree, and must, therefore, exist in them for

modifying the impulse given to the membranous structure of the labyrinth by the slender bone; it may, indeed, convey some undulations from the membrana tympani to the vestibule, in the same manner it does to the cochlea in the mammalia, but, as I have before stated, its situation is unfavourable for this office.

When an impulse is given by the stapes to the membrane covering the fenestra ovalis of the mammalia, can that imparted at the same time to the membrane of the fenestra rotunda tend to repel the stapes, and prevent such a degree of action on the membranous structure of the vestibule as would take place provided no such opening existed? The two distinct scalæ make this somewhat doubtful, as one of them almost entirely communicates with the fenestra rotunda, and the other with the vestibule; the undulations imparted by the membrana tympani to that of the fenestra rotunda may, nevertheless, in some measure answer this purpose, and particularly as the two scalæ communicate at the apex, and are partly divided by membrane. If the membranous structure of the labyrinth were inclosed entirely by bone, it would not receive the impressions or undulations from the stapes with the same nicety it does by the assistance of the fenestra rotunda. The fenestra rotunda in the mammalia varies very much in size, and in some animals is larger than the fenestra ovalis; and this precludes the opinion that it exists merely for counterbalancing the impulse conveyed by the stapes.

Many further inquiries remain to be made respecting the precise uses of the curious configuration of the labyrinth; but it will be previously necessary to take some notice of the functions of the auditory nerve.

When an impulse is communicated from the stapes to the nerves in the labyrinth, is it given to that portion spread on the membranous structure of the cochlea, as well as that of the vestibule and semicircular canals, so that every part of the auditory nerve shall receive an impression from the same sound? I believe every part of the membranous structure does not receive an impulse from every sound, and therefore an impression is not made on the whole nerve.

Supposing an impulse to be given by the undulations to all the nerve con-

tained in the labyrinth, is one part of it capable of receiving only one note or sound, another portion a second, and so on? If this were the case, the most minute divisions of it must have separate properties inherent in them; and I do not believe that the different parts of it are themselves capable of producing these varied effects. Then if an impression be made on the membranous structure of the labyrinth by the stapes, does one termination of a semicircular canal hear A, another B, &c.? and would the part hearing A not hear B, and B A, and so on. I presume the nerve is capable of appreciating the undulations conveyed to the membranous structure of the labyrinth, according to the power given by the form and extent of the cavities, including each of its respective portions. The labyrinth in man might have been more extensive, as it is in some animals, but then it might not have answered the purposes most conducive to his comfort and convenience; he might have heard fainter or more distant sounds than his ear can now appreciate, but he could not then have felt with the same delight either the powers of the human voice or music.

Hearing could not have been produced without the mechanism of the labyrinth, for had the auditory nerve been distributed on a flat portion of membrane, or any other contrivance for receiving an impulse from undulations of air, a confused sensation of sound must have been communicated to it. It is necessary that music should be composed in a peculiar order for impressing the auditory nerve with its beauties, or even agreeable sounds; and therefore it may be said that music formed mechanically, by different instruments, or through the mechanical assistance given to them, would have been communicated in regular notes, or sounds, to the nerve, in whatever way this was disposed. Few will, I conceive, admit this opinion. The ear was formed in a line of peculiar mechanism, and capable of perceiving sounds, which must be emitted in a particular order; and all music has been adapted to this structure, and could not have been appreciated either as harmonious or agreeable without such adaptation. The labyrinth of birds is different from that of man, but it can appreciate music; for some species can imitate tunes,

and others the human language. Doubtless birds could always sing in tune if they could reason, and knew how to dispose the notes which the labyrinth is capable of receiving. But could they comprehend all the notes perceived by the human ear? Would not their different form of labyrinth require a different disposal of many of those heard by man? I conceive this would be necessary; for although their hearing be sufficient for judging of some notes, or tunes, yet a falling-off would be found, and variations required, in the same manner as different forms of notes are required in the execution of a piece of music by an assemblage of different instruments. We find variations in the labyrinth necessary for determining the capability of hearing in different animals, and in the structure of the eye for the required state of vision. The retina cannot of itself produce vision, but the mechanical powers of the eye are necessary for directing the rays of light to fall upon it according to the laws which regulate them; and this position is satisfactorily proved by the removal of the crystalline lens, and the consequent confusion of sight. We cannot observe these changes in the same manner in the ear, as its different parts cannot come sufficiently under our notice.

6, Tavistock-Square, Oct. 17th.

AN ESSAY

ON

ARTIFICIAL TEETH,

BY LEONARD KOECKER,

Surgeon-Dentist, Doctor in Medicine and Surgery.

[Continued from p. 109.]

On the indications and counter-indications of the use of Artificial Teeth.

THE proper decision of the question whether artificial teeth be positively indicated or not, is frequently dependent on very deliberate considerations, which can be estimated only by a perfect knowledge of all the changes and effects which are the result of time, age, and mastication, as well as of the diseases

and the natural curative powers of the teeth, and of the parts in any way related to them.

It is not an uncommon occurrence that one or more artificial teeth are inserted without any necessity, as where the loss of a tooth does not materially affect pronunciation or appearance, or where the case is of such a nature that the insertion of artificial teeth, instead of restoring the loss, inevitably increases the evil which it is intended to remedy, of which the following instance will afford an illustration:—

CASE II.

Mr. A. a medical gentleman of considerable celebrity, consulted me in Aug. 1827, about his teeth, some of which were loose from inflammation and great relaxation of their periosteum. On examination, I found he had lost his first and second molar teeth on each side of the upper jaw, which were replaced by artificial teeth carved in one piece of Hippopotamus tooth, fastened by clasps or springs to the bicuspid and wisdom teeth, which had thereby been rendered quite loose. Thus the effect of these artificial teeth was evidently not only the rapid destruction of the contiguous teeth, but instead of assisting in mastication, which was the only advantage that could be expected from the application of these molar teeth, as they could not be beneficial to either pronunciation or appearance, they positively interfered with the functions of the other teeth, by their injurious mechanical bearing, and the irritation which they necessarily produced.

The use of one or more artificial teeth is, however, properly indicated, and must be useful and necessary, if they can be applied without bearing too much upon the remaining teeth; and if they can be rendered an assistance either in mastication, pronunciation, or for the improvement of appearance. But as different defects and losses require separate restorative means, it is necessary to view the various indications of different circumstances, which will be best considered under the following heads:—1st. As single artificial teeth; 2d. small sets of two or more teeth; 3d. sets of the whole upper jaw; 4th. sets of the whole under jaw; 5th. whole sets for both jaws.

Single artificial teeth are never, under

any circumstances, calculated to assist mastication; the only advantage they afford is an improvement of pronunciation and appearance. I have, therefore, never considered it proper to restore the loss of only one molar or bicuspid tooth, but have confined this operation principally to the incisors or cuspidati; and the insertion of these teeth is often contra-indicated or liable to exceptions. If, for instance, a young individual under the age of 20 loses one of the cuspid teeth or lateral incisors, either in the upper or under jaw, I have in most instances dissuaded the patient from having a tooth inserted, and the vacancy has generally at length become so occupied by the remaining teeth, as to render the loss invisible, and an artificial tooth unnecessary; should such a loss take place, however, at a later period of life, and the vacant space be not of uncommonly small dimensions, the insertion of an artificial tooth may be useful, and more frequently in the upper than in the lower jaw.

The central incisors being the most conspicuous teeth of the mouth, and their loss the greatest detriment to appearance and enunciation, the absence of one of them is generally sufficiently indicative of the adoption of an artificial restorative; but should it be an under incisor, and the subject has the advantage of youth, I would in most instances permit the remaining teeth to occupy the vacant place.

Small sets of two or more artificial teeth, as well as single teeth, are very improperly intended for mastication; and if made for this purpose, will always tend rapidly to loosen the remaining teeth. This circumstance is too frequently disregarded by the dentist, as the case above related sufficiently proves; their utility must, therefore, be considered to extend, in every instance, exclusively to the improvement of pronunciation and appearance.

If only the molares and bicuspidati are lost, without the absence of some or all of the incisors or cuspidati, there is not sufficient reason for the use of artificial teeth; for neither appearance nor pronunciation will be materially benefited. Should, however, some of the incisors, or even but one of them, be part of the lost teeth, it may be proper to apply a set which substitutes all the lost incisors, cuspidati, and bicuspidati; and even sometimes a molar tooth

may be usefully included in the artificial apparatus.

Sets of artificial teeth for the whole upper jaw are sufficiently indicated not only when all upper teeth are lost, but even while some detached teeth are yet remaining. Such teeth are intended not only for appearance and speech, but also for mastication; and if they are in every respect judiciously constructed, the artificial apparatus will be found not only to produce all the advantages just stated to the greatest extent, but will also promote the preservation of the remaining upper teeth, by their support.

Sets of artificial teeth for the whole under jaw are, perhaps, of all, the most rarely required; for the loss of the teeth of the upper generally precedes that of the lower. Should, however, the case occur, a proper artificial substitute for the lost teeth would be even more desirable, and more positively indicated for the sake of appearance, mastication, and health, than in the former instance; and all the advantages just stated may be expected to the greatest extent.

A whole set of artificial teeth for the upper and under jaws is properly indicated not only when all the teeth are lost, but also when some of them still remain. In every instance in which the deficiency of molar teeth is of such a nature as to deprive the two jaws of that necessary support by which they are kept in their proper situation, and at a proper distance, a double set of teeth is very desirable. Thus when, for instance, the front teeth are still in a healthy condition, and the remaining molar and bicuspid teeth in both jaws are each without an antagonist, the whole weight of the two jaws must rest upon the incisor and cuspid teeth, which in most instances lap over each other, and by their oblique pressure must soon be rendered loose, unless they are supported by an artificial apparatus; but should this support of the upper and under incisor teeth be also absent in addition to the loss of every antagonist of the remaining upper or under small or large grinders, the indication for a double set of artificial teeth is still more decisive, and the advantages which have been stated to result from their judicious application in those cases in which whole sets for the upper or under jaw are separately inserted, may be as fully expected in the present instance.

Materials for the construction of Artificial Teeth.

Artificial teeth are frequently rendered a cause of injury, by their being prepared of improper materials—such as are either too soft or too hard, or liable to chemical changes of various kinds.

If such materials are too soft, they are liable to be very early eroded, in consequence of which they become discoloured, and a cause of caries to the natural teeth, and inflammation to the gums.

Any kind of bone not harder than the tooth of the elephant, and artificial teeth made of ivory, should therefore be avoided.

If the artificial teeth be made of any substance which is so hard as not to permit its proper adaptation, it is apt to produce inflammation, and consequent destruction of the parts with which it is placed in permanent contact.

Small sets of artificial teeth made of one piece of a kind of mineral, or terro-metallic preparation, may justly be ranked in this class. Repeated attempts have been made in Paris, London, and Philadelphia, to render such preparations more perfect; but success, I fear, must be considered hopeless, from the simple fact that it would be founded on principles contrary to the laws of chemistry; for such whole pieces being made of a soft paste, which is afterwards baked in the oven by a similar process to the manufacture of china, they are necessarily exposed to the changes in size and form which the heat produces.

From these considerations, the only kind of artificial teeth, and the materials for their preparation, that I use, are the teeth of the sea-horse, human teeth, and single mineral or terro-metallic teeth, mounted in various ways upon gold or platina.

All other metals, as lead, tin, and even silver, should be rejected, from their liability to chemical changes.

As the best materials for the construction of single artificial teeth, I would recommend the application of either human teeth or terro-metallic teeth only.

In the choice of these the dentist should be guided by the state of the mouth, and the tooth to which the artificial tooth is to be attached; and should the remaining teeth and the ge-

neral state of the mouth be healthy, the choice may be left to the patient; but if otherwise, a human tooth would be more particularly indicated.

These teeth are to be mounted, by various means, on golden plates, which have been previously well fitted to the gums, and are to be retained in their places by golden springs or clasps, attached to some of the remaining teeth. If such single teeth are well prepared, and attached with the requisite judgment, they may be used for many years, and frequently during life, without producing any injurious effects upon the remaining teeth, while they tend greatly to improve pronunciation and appearance.

As the best materials for the construction of small sets of two or more artificial teeth, the same rules as above may be considered most judicious, both as it regards their kind and their choice of the materials.

The materials for sets of artificial teeth for the whole upper jaw, and the mode in which they are constructed, must vary according to the circumstances in which they are applied.

If such an apparatus is applied when some of the incisor and molar teeth of the upper jaw remain in a good and healthy condition, it will be requisite to fit a gold plate to the gums, to which either natural or mineral teeth are so attached as to substitute every lost tooth; if, however, every tooth of the upper jaw has been lost, and the gums are in a perfectly healthy state, and the teeth of the under jaw also healthy, it may be considered a matter of choice to the patient which kind of the following artificial teeth might be most agreeable to his wishes and circumstances—namely, an apparatus constructed of natural or mineral teeth, mounted on a gold plate; or one carved of a single piece of Hippopotamus tooth, with or without human teeth in front. These artificial preparations are to be kept in their proper position by spiral springs, fixed at one of their extremities to the upper set, and at the other to a gold frame or band attached to the under molares and cuspidati, by means of three or four hooks or caps. In some cases of this kind I have, however, succeeded in applying an apparatus made entirely of sea-horse tooth, so as to be perfectly held in its place by suction or capillary attraction.

The materials best calculated for sets of artificial teeth for the whole under jaw, are the same as those for the upper maxilla.

Each of the preparations described may be applied under similar circumstances with equal convenience, without requiring any springs or other means to keep the set in its proper place, if it be well adapted to the gums and the upper teeth; and the choice of the kind of teeth should therefore be dependent on the same considerations as for the preparation of a set for the upper jaw.

The cases, however, in which such sets for the lower jaw are required are exceedingly rare, for in every instance that I have seen in which disease has caused the defect, the loss of the upper had invariably preceded that of the under teeth: still some accident or unusual circumstance renders its occurrence at least not impossible.

The materials best calculated for whole sets of artificial teeth for the upper and under jaw, as well as the modes of their preparation, must naturally be similar to those just stated.

For those cases where all upper and under teeth are lost, any one of the above-mentioned preparations may be adopted, although for the first time. A set of carved, either entirely of sea-horse or furnished with six or eight natural teeth in front may be the most desirable, from the great facility afforded by this mode to a perfect adaptation of the apparatus to the gums.

If, however, some few teeth remain by which the continuation of the arch of the artificial set is interrupted, a gold plate is requisite, on which single human or mineral teeth may be mounted, and the two pieces for the upper and under jaws kept in their proper situation by spiral springs, the two extremities of which are to be attached by swivels to the upper and under parts of the apparatus.

On the manner of constructing, and the means of attaching Artificial Teeth.

The preparation and mechanical construction of artificial teeth, as I have already observed, is attended with considerable difficulty; and their proper adaptation, as well as attachment to the other teeth and gums, requires the combined qualifications of mechanical and surgical skill. It is evident, therefore, that artificial teeth may be ren-

dered very injurious by unskilful management: if, for instance, they are not very well fitted to the gums, or if they bear upon such particular parts as are naturally more tender and irritable than others, as the edges of the gums surrounding the necks of the teeth; or if they violently and irregularly press against the remaining teeth they cannot fail to become the causes of disease.

Of the various means for their attachment of the natural teeth, nothing can be more injudicious than the use of any kind of ligature, either of gold wire, silk cord, or any other material of the kind; for such ligatures, by their stress upon the teeth to which they are attached, must inevitably produce great relaxation and inflammation of their sockets and periosteum, by which the teeth are soon rendered so loose as either to require extraction or to drop out. The use of ligatures for retaining artificial teeth is therefore, under all circumstances, objectionable, and should be entirely rejected. Even the best means for this purpose — namely, springs or clasps, applied without sufficient skill, are liable to produce the same effect as ligatures.

To obtain, therefore, the greatest possible advantage from artificial teeth, and to prevent their injurious consequences, I have adopted the following rules:—

Single artificial teeth should be intended for no other purpose than the improvement of appearance and pronunciation. Their assistance in mastication is neither necessary nor attainable, for every hard pressure upon the artificial tooth in mastication, in whatever direction it may be made, always acts upon the other teeth and gums.

In mounting single artificial teeth on the plate, I have taken care, 1st, to fit the basis or plate very exactly to the gums; 2dly, not to permit the edges of the gums which surround the two neighbouring teeth to be pressed or even touched by the plate; 3dly, to prevent the artificial tooth coming in contact with the two neighbouring teeth; 4thly, not to allow the artificial tooth to touch or strike in any direction against any of the under teeth when the mouth is shut. In their attachment I have invariably made use of no other means than two springs or clasps, fixed to such of the remaining teeth as seemed

to me best calculated to retain the artificial teeth.

I have already stated the pernicious effects of such springs as, from their injudicious preparation, produce unnatural or violent pressure upon the remaining teeth, and shall now proceed to point out their causes, and the means I have adopted for their prevention.

The usual way of fastening the springs to the two adjoining teeth, renders it difficult, from their shortness, to give to them the necessary elasticity. They, therefore, produce violent pressure, as they are too frequently made in such a manner as to act like a lever upon the natural teeth; but these are generally in a tender state, and are ill calculated to fulfil, in addition to their natural functions, the mechanical labour of supporting their artificial neighbour. I therefore have made it a point to avoid the tender teeth, by carrying the springs to some which are more distant, and which, from their health and situation, are better calculated to support the artificial teeth. I make it another rule not to let the springs bear upon the other teeth, or the edges of the gums, but make them rest upon some part of the mouth better calculated to bear the pressure, and less irritable and predisposed to inflammation, or any other kind of disease; and I also take particular care to prevent any violent pressure, by proportioning the strength of the spring to the length and distance of its attachment.

To render the pressure by which the springs are attached to the natural teeth perfectly harmless, I contrive to apply it in such a manner that the teeth are pressed neither in one nor other direction exclusively, which would inevitably cause relaxation and inflammation of the periosteum, sockets, and gums, but that they rather grasp the tooth, and press on two opposite sides, in such places as are perfectly sound; neither do I permit this pressure to be stronger than necessary. I also take particular care to give such elasticity to the springs that the artificial tooth may be removed and replaced without giving pain; and, lastly, I invariably make all artificial teeth, whether single or in sets, in such a manner that the patient is enabled to remove and replace them at will with facility.

Small sets of two or more artificial teeth are constructed and fastened under
101.—v.

the same principles as single teeth, with such deviations only as the different circumstances accompanying the case may require.

Sets of artificial teeth for the whole upper jaw, as already stated, should be prepared either entirely of a single piece of hippopotamus tooth, or of the same material, furnished with six or eight natural teeth in front; or of natural or mineral teeth mounted on a gold plate.

In the preparation of this apparatus, it is of great importance to consider that such teeth are intended not only for appearance and speech, but also for mastication. Particular care should be taken to adapt the plate as exactly as possible to the gums, and so as not to press on the natural teeth, if any should remain; and in those cases in which all the natural teeth are lost, I deem it preferable that all the upper teeth should meet the under by contact rather than in that direction in which the upper incisors lap over the under.

The set is to be retained in its place by means of two spiral springs, fastened to it by gold swivels at one extremity, and at the other to a gold frame, attached to the under teeth by means of gold hooks or caps. Various kinds of springs have been invented, of a more or less complicated construction, which are so much surpassed, in utility and simplicity, by the spiral springs, as not to deserve any notice.

Should there be sufficient indication for making use of a set which is to be kept in its place by capillary attraction, or by suction, it should be made of one piece of hippopotamus tooth; and the plate which rests upon the gums should be exactly fitted, and as broad as possible; and great care should be taken that in shutting the mouth the artificial teeth press equally upon all the under teeth. I have, by observing these cautions, been completely successful in several instances in the application of sets for the upper jaw in this manner, which is certainly very desirable, from its great simplicity and convenience.

Some dentists of advertising celebrity pretend to be able to construct all kinds of artificial teeth in such a manner as to be retained in their places by capillary attraction alone; such pretensions can be viewed only in the same light as those which attribute the power of curing every human malady with

one and the same patent medicine or nostrum.

Sets of artificial teeth for the whole under jaw should be made on the same principles as those of the upper jaw, but with the difference, that from their situation they would rarely, if ever, require any springs.

Whole sets of artificial teeth for the upper and under jaws are prepared and inserted under a great variety of circumstances, and they require to be regulated by those principles which I have endeavoured to establish for the separate preparation and insertion of artificial sets for the upper and under jaw.

[To be continued.]

MEDICAL AND SURGICAL ETHICS.

BY A PHYSICIAN*.

"Non omnia possumus omnes."

In reading over Mr. Lawrence's introductory lecture to a course of what he calls "Medical and Operative Surgery," it will be seen that that gentleman endeavours to level the distinction which has hitherto been supposed to subsist between the medical and surgical departments of the healing art. As this is a subject in which the public are parties, as well as physicians and the surgeons, the discussion of it cannot be confined to the theatre of St. Bartholomew's Hospital.

There are but two ways in which the distinction between medicine and surgery can be removed. One is, to render degrees in medicine in the universities unnecessary for the practice of medicine; the other, to render the university medical degree a necessary qualification for the practice of surgery. In fact, either to raise the standard of surgical education, or to lower that which is at present necessary for the education of the physician. In an age so intellectual as the present, to lower the standard of education in any department would be a startling proposition; the former alternative alluded to then only remains.

Should Mr. Lawrence, or any other well-educated surgeon of the London schools, be ambitious to obtain a degree in medicine, a term of four years' at-

tendance will be necessary in the universities of Dublin or of Edinburgh, before he can be admitted to examination, according to the statutes of these universities; and a longer period at the universities of Oxford or Cambridge. The College of Surgeons, should they wish, are competent to make and enforce such regulations among the members of their own corporation; and thus, and thus only, can they remove the distinction which subsists between medicine and surgery. That is,—by becoming themselves physicians. "Omne majus continet in se minus." The physician understands, or ought to understand, surgery; but the converse of the proposition does not hold,—surgery does not necessarily include medicine. When a medical degree shall be made necessary for surgeons, as well as physicians, practitioners may then follow the bent of their own inclinations, and practice medicine or surgery,—or both. Such an arrangement would secure to the public the benefit of scientific acquirements, without the charlatanism of pretension founded on academic rights or privileges.

That four years' study in a university, superadded to a surgical education, would ensure to the public good medical practitioners, there can be no doubt; therefore, so far as the public are concerned, the plan would be a good one; and as such an expense of time and money would exclude from the profession many, who, according to the present system, become surgeons, and consequently medical practitioners, the plan would be beneficial to all those who could afford to take medical degrees. But, besides the illiberality of excluding from practice individuals who may possess great talent, although they may have little money—whose minds may be large, though their means are small, we should still find that something like the present subdivision of labour would be necessary. But surgery, in its literal acceptance of operative, which some consider too narrow to bound the views of the surgeon, is found practically too comprehensive. We find oculists, aurists, and dentists, who are all scions of surgery, make fortunes in London, although confining their practice to particular departments of surgery. Even the manipulation of spines, particularly those of young ladies, if adroitly performed, may be sufficient, as a department of surgery, to make the for-

* Willing to promote free discussion, we have given insertion to the observations of our Edinburgh correspondent; at the same time we must say, that he appears to us to stretch Mr. Lawrence's meaning beyond what a fair interpretation of the text admits.—ED. G.

tune of a specious practitioner. How much more befitting the march of intellect and the progression of science, for the regular and scientific surgeon to collect together these scattered fragments of surgery, properly so called (operative), and to constitute one perfect surgical whole, to occupy his time and talents, than to allow the oculist, aurist, dentist, and even the spine-manipulator, to strip him by piecemeal of the lucrative portions of his own profession, and then to make incursions himself into the province of the physician, and under the quaint designation of "medical surgery," to endeavour to assume the privileges of the physician without taking care previously to possess his knowledge.

Every one who has taken a degree in medicine in a regular university, has attended courses of lectures on at least six or seven sciences connected with medicine. In every and all of these sciences he must have been prepared for examination, and may have been examined in all of them, before he got his degree. But should the same individual aspire to become a teacher, or should he by interest, or even talent, obtain a professor's chair, he will find one science amply sufficient to employ all his mental powers. The public seem to make a similar judgment in the departments of surgery to which I have already adverted; and although Mr. Lawrence may understand the eyes, ears, and teeth, and even the spine, as well as the professed oculist, aurist, dentist, and spine-manipulator, the public cannot be brought practically to think so.

But let us suppose for a moment that Mr. Lawrence and the other hospital-surgeons of the metropolis, like most of those of Dublin and Edinburgh, were regular doctors in medicine. They would still find it necessary (like those of Dublin and Edinburgh) to sink the M.D. while practising surgery. It is impossible to combine in one individual all the requisites in the wide range of medicine and surgery. I admit that no man can know too much of his profession, or of the sciences connected with it; nor can he possess too much general information; but I am quite certain that he cannot practice medicine and surgery in all their various departments, nor will the public afford him the opportunity.

In conclusion, as Mr. Lawrence

and the other members of the Council of the Royal College of Surgeons in London, are not likely to concede the privileges of their college to medical men who have not taken a diploma in surgery, nor are likely to recognise their right to practice it; so are physicians not likely to recognise the right of surgeons to practice medicine, until they shall have taken a medical degree in some recognised university. It would be well, however, and would be for the benefit of all parties—the public included, that some conventional etiquette were established, regulating the intercourse between physicians and surgeons. Were this done in the great public hospitals, the etiquette established there would soon extend to the relations of private practice, and put an end to jarring claims and pretensions, which are any thing but creditable to medical science.

Edinburgh, Oct. 1829.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A New Method of Treating Burns and Scalds, and certain Cutaneous Eruptions. Parts I. II. and III. By MICHAEL WARD, M.D. S.R.C.S.L. late Surgeon to the Manchester Infirmary, &c.

Among the many extraordinary productions in the shape of medical writings which come under our notice, the one which lies before us stands pre-eminent. In typography it is the most curious intermixture of roman, capitals, and italics, we have ever witnessed; and in medicine, the most felicitous blending of cases, comments, correspondence, notes, corrections, and commendations, that can possibly be imagined—a model of scientific arrangement and monument of professional ingenuity. There is literally nothing new in it, and yet, *mirabile dictu*, that nothing is divided into three parts. The whole of the volume, such as it is, may truly be said to be contained in the following short extract, which also has the advantage of illustrating the author's method of attracting notice, by the arrangement of the types, to what cer-

tainly would never command attention by the value of the matter:—

“We will suppose the clothes of some person, *no matter how old or young*, to have taken fire, and to have continued burning some time before the fire could be extinguished; or, secondly, that one or more human beings have escaped or been rescued from a House, a Factory, or other Building in flames, but not until they had sustained considerable, perhaps irreparable injury from the fire; or, thirdly, that one or more persons have been exposed to the action of fire by an explosion of gunpowder, inflammable air in a Coal Mine, or any other cause; or, lastly, that some unfortunate individual has fallen into a vessel of boiling liquor in a Brewhouse or Distillery; accidents which are well known to be as frequent as they are dreadful. In all these cases, (and of course in all those of the same nature, *but of less extent and magnitude*,) the *first* object will be, (after having laid the patient upon a bed or sofa,) *without a moment's loss of time to take off the clothes* AND APPLY BREAD FLOUR, BY MEANS OF A COMMON KITCHEN DREDGER, PLENTIFULLY, AND AS EXPEDITIOUSLY AS POSSIBLE, TO THE WHOLE OF THE BURNED OR SCALDED SURFACE, and this being properly and sufficiently done, carefully applying clean dry linen cloths immediately over the flour, and such bed clothes or other coverings as may be required to keep the patient comfortably warm, but not too hot.”

Such is the discovery which is to hand down the author's name to posterity; and, meantime, has secured him the applause of Mr. Tatham, the Reverend Mr. H. Penny, and Mrs. Hyde. The last, says Dr. Ward, “is an honour to her sex; whose praises, supposing for a moment I would be said to merit them,—are fame.” So great is the value of the remedy, that one young lady, a member of a large family, who, after a dreadful burn, was so efficiently dusted with the “dredger,” as speedily to become the “flower of the flock.” Describing one of these cases, the author exclaims—“What might be the ideas and sensations of COLUMBUS when his eyes first caught a glimpse of AMERICA, I shall not presume to say, but it is not possible, I humbly conceive, for them to have been more poignant, or of a more pleasing and gratifying description, than mine at that moment.”

Having thus followed the learned author to the other side of the Atlantic, we shall leave him there; nor need we regret this, for he will remember that his friend Columbus, when he returned, was rather ungratefully treated; and notwithstanding all the Doctor lays claim to, it is just possible that he might meet with a similar fate, were we to extend our remarks.

A Practical Treatise on Acute Abdominal and Pelvic Inflammation; containing a comprehensive clinical View of Inflammation of the Stomach, Bowels, Peritoneum, Uterus, &c. with a certain and expeditious Method of Cure. By DAVID NICHOLAS BATES, Medical Practitioner.

THE tendency of this little work, so far as its influence may extend, must be injurious. It is true, it contains nothing calculated to push it into general notice; but as some may, by possibility, be guided by the precepts it contains, we think it right to enter our protest against them.

The description of inflammation is meagre, but not otherwise remarkable: of the treatment we must speak differently;—it is not only deficient, but so erroneous that we could not have imagined it to have emanated from a practitioner who had seen even half a dozen cases of the disease on which he writes, had he not expressly stated (p. 48) that there is no part of it which has not been confirmed by “reiterated experience.” Speaking of the treatment, Mr. Bates says, “This may be successfully conducted in two ways; the *first*, by enema; the *second*, by medicines taken by the mouth; or the former may be brought to the aid of the latter, should it not prove quickly effectual in removing the disease; or the *two plans of treatment* may be conjoined; although, when the former is used, such a combination will not be necessary, as its success is certain.”

We read this passage several times over before we could persuade ourselves that there was no mistake or misapprehension on our part.—Two methods of treating *acute abdominal inflammation*, “the first by enema! the second by medicines taken by the mouth”!! and again, when the former used “success is certain”!!!

Absurd as this is, it is still more ridi-

culous to find that the first part of the plan, "by enema," is, to take a pint of blood from the arm, in all cases where the strength will admit of it. After this, from one to two drachms of tincture of opium is to be administered, in the form of clyster, in the decoctum amyli, and the enema to be repeated in twelve hours, if necessary. Along with these remedies, the horizontal posture, leeches, and fomentations to the belly, and low diet, are recommended: and thus does Mr. Bates treat acute inflammation of the abdominal viscera.

That this method will succeed in very mild and favourable cases, we have no doubt; neither have we the slightest hesitation in affirming, that where it does, the cure depends—not upon the opiate clyster, but the venesection, leeches, and fomentations.

The second plan, or that by medicines administered by the mouth, likewise commences with the abstraction of a pint of blood; after which is to be given a bolus containing one grain of opium, and a like quantity of antimonial powder and pulvis acaciæ: this to be repeated in an hour, and then continued every two hours, till the pain ceases. But if, after the tenth or twelfth bolus, decided relief be not obtained, recourse must be had to the opiate enema. In Dr. Armstrong's paper (Transactions of the Apothecaries) wherein he advocated the treatment of abdominal inflammation by opium, he had the prudence to direct that the patient should be largely bled two, or even three times the first day, a dose of opium of about two grains being given after each venesection; but Mr. Bates "out-Herods Herod," for he only allows us to bleed once while we give ten or twelve grains of opium by the mouth, and wind up by a drachm or two *per anum*. A yet greater ignorance of the action of medicines is manifested by his condemnation of calomel, because it "is apt to disagree with a scrophulous constitution." Thus we are to avoid the most powerful means, next to bleeding, we possess, of arresting a most dangerous inflammation, lest it should "disagree" with the patient. "Hydrargi submuriæ, either alone, or combined with any other purgative, must be totally excluded." (p. 47.)

The author afterwards proceeds to indulge in some theoretical views with regard to the nature of inflammation—

the state of the blood-vessels—the influence of the nerves, &c. To these we have no objection; every man has a right to have "his say" upon these topics as well as his neighbours; it is only against the practice we protest. So far as his brethren are concerned, Mr. Bates has little to fear, for we sincerely believe no one will be rash enough to follow his advice; but, as regards himself and his patients, he will be a lucky man if he does not one day find, to his cost, that the mode of curing acute inflammation of the abdominal viscera does not consist in binding up the bowels with opium administered by either extremity.

An Account of the Mode of performing the Lateral Operation of Lithotomy; with Illustrations. By EDWARD STANLEY, Assistant Surgeon, and Lecturer on Anatomy and Physiology, at St. Bartholomew's Hospital.

This work consists of a set of plates representing the parts concerned in lithotomy, in all their aspects; and of a description of the mode of performing the lateral operation. The plates are exceedingly well done on stone, with the arteries coloured; and the introductory observations, without any aim at novelty, contain a simple and perspicuous explanation of the different steps of the proceeding. The work will be of great use, both to the student who wishes to attain precise ideas on the subject, and to the practitioner who is desirous of refreshing his memory on the points to which it refers.

MEDICAL GAZETTE.

Saturday, Nov. 7, 1829.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

MARCH OF INTELLECT.

It is a consideration as humiliating as it is true, that while we are flattering ourselves with the progress the age is making in science, knowledge, and

improvement, instances are daily occurring of the regeneration of superstitions and follies, as gross as those we condemned in what we affect to call less enlightened times.

The tales invented to stimulate political fervour lose something of their grossness in the consideration of the vast and mighty interests with which they were blended, and are somewhat excused by the excited imagination of the people. The miserable tales and false miracles which disgraced the contests of the Jansenists and Quietists are forgotten; while the writings of Pascal and of Quesnel remain to redeem, from the lowest contempt, their disciples who invented, and the multitude who greedily caught at, wonders so ill contrived, that some degree of credulity appears to be required ere the fact of their belief be established. In our own country, the superstition of the Cock-lane ghost belongs, we fondly believe, to an æra which the progress of education and improvement in philosophy has left at an immeasurable distance.

Let us examine whether passing events justify this supposed superiority. The Cock-lane ghost was surely a harmless superstition compared with the blasphemous adventures of Joanna Southcote. The miraculous cure of the niece of Pascal, believed by the devout, in the time of Louis IV. may fairly be excused, when the miracles of Prince Hohenlohe have found credence in England among not a few of the enlightened subjects of King George the Fourth. It would be needless to mention the minor fables of the Princess Caraboo, or the Tuthury woman who lived for so many weeks without food.

Among not a few of the superstitions which have afflicted mankind, may be reckoned the faith in specifics or modes of cure, recommended principally by the pain they inflict—by their peculiarity or their indecency. Such faith is

more excusable, as it takes its rise from the infirmity of human nature—the gratification these means hold out to the longings of the afflicted relative or the suffering patient. The occasional prevalence of such follies is a subject of sincere sorrow to those who cultivate the healing art: the cheat fails not in time to be discovered, and the science suffers. The real advantages—the incalculable comforts which the proper administration of the medical art affords, are lost in the disappointment of those who aim at all or nothing.

But how does this apply to the present time. The *elixir vitæ* sleeps in the same tomb with alchemy and judicial astrology—the visions of Cagliostro, and, we had hoped, the works of Puysegur, might be referred to the good old times before the Revolution. People now never seriously think of repairing to cow-houses, or being stripped naked and buried in loose mould before their time, for the cure of phthisis. The solvent of Mrs. Stevens, though approved and rewarded by the collective wisdom of the Parliament, has long ceased to be heard of; and, in truth, specifics for the instantaneous cure of disease exist only like the orvietan in the novels of Sir Walter Scott, and patients only awake perfectly well from a critical sleep in nervous fever, to content the languishing wishes of the hero of a romance.

Still at this very moment—in this enlightened metropolis—within a very short distance of that citadel of intellect, the University of London—a man flourishes by what he calls curing consumption: he has a specific which he will not disclose, which restores to life and health, and society, those unhappy victims of disease who have already large excavations in the lungs from the supuration of tubercles. To those who have witnessed the appearances after death in fatal cases of this disease, such

a pretension is fit only to excite ridicule; but it becomes a very serious matter when it is so far believed that persons actually set about defending such charlatanism in print. The arguments are such as these—"Because you cannot discover a remedy yourself, can no other man? but the medical profession was ever illiberal and envious. Look at the remedies invented by Empirics—the first use of bark was a species of Empiricism—the powders of Drs. Dover and James, and other quack medicines, have long since been admitted into the Pharmacopœia—remember the opposition to vaccination."

All this is very plausible: nobody denies that accidental circumstances have first brought some active medicines into notice; but great care, and the experience of ages, have been necessary to determine their value, and regulate their employment. Vaccination was proposed on scientific principles, and there was nothing contrary to the laws of pathology, as then understood. The discovery was an imperishable monument of the perfectibility of our art by the just application of talents, and by induction from established facts, combined with observation.

That some of the persons who have consulted Quacks have afterwards been better, it is unnecessary to deny. A host of invalids are always floating about London—some seeking relief for evils they never had, others trying to restore an appetite lost by indulgence, and which would be cured by abstinence from high-seasoned viands and luxurious living; and others broken down by labour, which has failed to conduct them to the goal of their wishes. Many of these, doubtless, find their way to Mr. St. John Long, and feel relieved for a time by the hope that they have discovered the nostrum which has long disappointed their search.

Let those who, during the war, practised at Bristol and in Devonshire, say

how many of the patients who applied to them were really cases of consumption; how many had winter-cough; how many asthma; how many disordered stomachs; how many young females at 16, nearly the martyrs of fashionable education, and the eternal drilling of accomplishments, recovered, of supposed consumption, by air, exercise, and good diet.

Some persons live several years with undoubted consumption. The destruction of the lungs is partial; sufficient is left for the purposes of life—of an invalid life, scarcely worth having. Regimen, and the occasional use of remedies, fitted to the particular changes of the case, prolong existence to a much longer period than is generally known. Such cases are often relieved by blistering, and doubtless are so by the excoriating applications of the curer of consumption; but that there is any remedy, which he or any other man has to repair the destroyed lungs, or remove the indurated masses which obstruct their functions, is a fable as gross as those we have alluded to in the tales which we laugh at of former times—the mixed offspring of knavery and credulity.

But is this all? shade of Haygarth* believe it not. The superstition is revived which you so successfully disproved, and with it the reign of mysticism. Magnetism—mesmerism, actually exists. Puysegur again lives and reigns; and the cures which you effected with two pieces of coloured wood, and the wonders which you performed by enlisting the imagination in your cause, are forgotten.

After this shall we rail at ancient superstition, and glorify ourselves on the march of intellect in the nineteenth century?

* See the invaluable pamphlet entitled "On the Imagination as a cause and cure of Disorders in the Human Body, exemplified by Fictitious Tractors and Epidemical Convulsions. By (the late) J. Haygarth, M.D. F.R.S."

MR. EARLE AND THE LANCET.

THE manner in which Mr. Earle was formerly spoken of by a contemporary journalist, forms an amusing contrast to the praise which has recently been bestowed upon him. Some, we believe, went so far as to imagine that Mr. Earle had in some manner courted the *Lancet*, or at all events, that he was gratified with the commendations he received in its pages. They did him wrong: the change alluded to was none of his seeking, but was regarded by him with the contempt which it deserved. No man was more uniformly, decidedly, and fearlessly opposed to the system of detraction, when it was on the ascendant, and to have listened to the voice of the slanderer now that all who make the slightest pretence to respectability shrink from any—even an implied connexion with him, as a stain upon their character, would indeed have been absurd.

But at all events, the matter is set at rest by what Mr. Earle took occasion to state on Saturday evening with regard to the publication of his Clinical Lectures.

"They were instituted," said Mr. Earle, "for the benefit of pupils actually attending the hospital practice.

"As the observations apply to the cases in the wards, they cannot be of any importance to the medical public who have not access to those patients, and as respects pupils actually attending the practice and the lectures, it must be quite superfluous to publish them.

"As the observations are often delivered without much time for preparation, and as they are given without the slightest reserve, it being my wish to open my mind freely, and state every circumstance as it occurred to me, it follows that many remarks may fall from me which I should not wish to have recorded. It will therefore impose a restraint upon me on many occasions, when it might be interesting to the student that I should be more communicative.

"All these fully sufficient and valid objections apply to the publication of my Lectures in any periodical. But

I have others, and even stronger, to urge against their being published in a work which for a series of years has persecuted me most maliciously, and which was employed as an instrument to injure or destroy my reputation; and thus, as far as it was able, to deprive me of the means of living and providing for my family.

"If I could flatter myself that any remarks of mine were calculated to promote the general good, or advance the cause of science, I should certainly wish to select some purer channel for communicating them.

"It may, and indeed has been, urged, that the editor is now sensible that he has injured me most unjustly, and THAT HE IS DESIROUS OF MAKING SOME REPARATION!!! I can only solemnly declare that I have not sought his praises any more than I have merited his reproaches. I cannot, however, forget—(I should be more or less than man if I did)—the lavish abuse and ribaldry with which I was weekly assailed; and I cannot, therefore, but doubt the purity of his present professions—'*Timeo Danaos etiam dona ferentes.*'

"If I have of late been spoken of in a different strain, I feel confident that I owe it to the honesty of the present reporter, and not to any forbearance on the part of the editor. I am happy to embrace this opportunity of stating that I believe that the gentleman who has for some time acted as reporter for the journal in question, has faithfully discharged his duty. But, gentlemen, I have been assured from different sources that the editor of that journal has *always* entertained respect for me. Until lately he certainly adopted an extraordinary mode of evincing it. I am willing, however, to believe, that he has respected me, for I am confident that I have never given him cause to entertain sentiments of an opposite nature. I hope, by my conduct on the present, and all future occasions, to compel him still to do so; but to accomplish this, I must not be wanting in that respect which is due to myself. I am well aware that, in adopting the present course, I am again laying myself open to his attacks: I am equally well aware, that by pursuing an opposite course, and by furnishing, as requested, notes of my lectures, and correcting the press, as some others have done, I might ensure some degree of commendation; but I trust that I shall never be induced

to seek reputation at the sacrifice of professional character—at the sacrifice of my independence—at the sacrifice of that consistency which I persuade myself has hitherto regulated my conduct—and, above all, at the sacrifice of the *mens sibi conscia recti*, which has supported me under all the attacks and aspersions his falsehood and malignity could invent.”

This address was received by loud and long-continued cheers from the pupils, among whom, it is only justice to say, but one feeling—that of unanimous and hearty concurrence—prevailed. What must be the character of a work in which no honourable man can suffer himself to be praised, lest his character be injured by it, and the public denunciation of which is hailed by the enthusiastic approbation of a numerous class!

We had sent instructions to our reporter to attend for the purpose of taking the lecture, which consisted of the description of an ingenious instrument of Baron Heurteloup's, for washing out the bladder in lithotomy, and of some valuable observations on vesico-vaginal fistula; but, finding that Mr. Earle did not wish them to be published, of course we cannot give them insertion.

We leave our worthy contemporary to congratulate himself upon the very respectable figure he cuts in this transaction. He one day ridicules, calumniates, and abuses Mr. Earle, because he thinks it will serve his purpose to do so. Next day he imagines an opposite course more likely to promote his interest, and therefore he be-praises, and fawns upon him till he thinks he has *smoothed* him sufficiently. He then ventures upon more direct advances: he sinks the threatening of the bully in the whining of the sycophant; commits himself—and is exposed. No experience ever enables such a person to comprehend the feelings of a gentleman.

MR. LAWRENCE'S LECTURES.

MR. LAWRENCE has withdrawn from all the Journals the permission he had granted to publish his lectures. “Circumstances,” he says, “had rendered it absolutely necessary for me to take this step.” Thus, then, ends the disgraceful effort on the part of the Lancet to make the public believe that Mr. Lawrence corrected his lectures for that Journal; and thus has Wakley drawn upon himself a contradiction of the falsehood from the very quarter he would most have avoided.

SIR GILBERT BLANE'S MEDALS.

THIS distinguished octogenerian physician, who began his long and honourable career in the naval service, has appropriated a sum of money for the purpose of bestowing gold medals on those surgeons of the navy whose medical and surgical journals shall be found to evince the greatest share of professional zeal and knowledge. A certain number of these journals is to be selected by the Medical Commissioners, and by them transmitted to the Presidents of the Colleges of Physicians and Surgeons, who are to be the umpires. The medals are to be awarded every two years.

The idea is well calculated to excite emulation in the medical department of the navy; and the name of Sir Gilbert Blane, already so highly respected, will be handed down in grateful remembrance to those who come hereafter in a service which has done so much to improve and to advance.

PROCEEDINGS OF SOCIETIES.

THE various Medical Societies of the Metropolis have resumed their usual meetings for the season. It is not our intention to do more than notice from

time to time any thing of interest which may occur.

HUNTERIAN SOCIETY.

At a late meeting Dr. F. Ramsbottom introduced the girl whose scapula had been almost wholly removed by Mr. Luke, on account of its being the seat of medullary sarcoma. The case and operation were formerly related to the Society, and have been reported in the Gazette. The wound had completely cicatrized, and the motions of the arm were not greatly affected. There was no indication of a return of the disease, or of its appearance in any other part.

WESTMINSTER MEDICAL SOCIETY.

DR. GRANVILLE and Mr. BACOT have been elected Presidents in the room of Dr. J. Somerville and Mr. Arnott, who go out by rotation. The meetings have been well attended, but the discussions heavy: the speaking is too much limited to two or three members, who favour the Society with their opinions on every subject. We subjoin a little squib which has been sent us; but we fear the point will scarcely be understood by those who were not present.

"INTERESTING" DEBATE.

To the Editor of the London Medical Gazette.

Wimpole Street, Nov. 3.

SIR,

Though I am doubtful whether you will admit a communication from one of the weaker sex into your Journal, (which I occasionally peruse in my husband's study), I venture to address a few lines to you on a subject deeply interesting to me; and, I am sure, to the wives of other medical men. You must know, sir, that I have been married but a few short months to one of "the profession," and during that time have had no reason to complain of unkindness, or to suspect that other "society" was preferred to mine. But, sir, last Saturday evening, judge of my feelings when I saw my husband suddenly start up, and order tea before the usual hour, as he had to go to the "society" in Sackville Street. At first I tried to dissuade him, but at length yielded, with the best

grace I could, when he assured me that the meeting was most important; that he had already lost two most interesting debates, and had thus forfeited a great benefit to himself. He went, sir, and left me to meditate on the sacrifices which the true lovers of science make in the pursuit of their object.

After an absence of two hours, or rather more, the well known knock at the door announced his return, and in proportion as I had been vexed at his absence, was I now anxious to draw from him as much of the "interesting debate" as possible. Now comes my grievance, for with some hesitation he reluctantly confessed, that after some interesting observations (*interesting*, I find, is the word) on the whims and foibles of our sex, under the learned name of hysteria, the "debate" opened with a solemn silence, which he affirms lasted three quarters of an hour; during which time my husband fell asleep; and of all that passed, merely heard at intervals a gentleman knocking the table with his fist, and who appeared to be in a monstrous passion, nobody knew about what; while, during the intervals, occasionally the words—subject—barren—prolific—pregnant, &c. dropt from the lips of an "honorable" gentleman in a huge red chair. He was at last fully awake by one of the members protesting against the chairman being allowed to call for spirits, as contrary to the custom, if not against a positive law of the society. After this followed a naughty story about two men holding an officer's "lady," screaming upon the floor, till a Doctor somebody came to her assistance. He did not catch the remainder, being scarcely awake; but I think there is quite enough of the story as it is. Yet only think of a gentleman, near the president, having the simplicity to ask "what was to be done in such a case." So, then, this is what is meant by a "case." I did not quite like the words "society," "meeting," and "interesting debate," but I had no idea it had been any thing half so bad as this. Yet what better could be expected when the chairman himself had recourse to spirits; and, as my husband told me, gave the noisy member "a rap over the knuckles."

I hope, that as an impartial Journalist, you will give insertion to this; and for my part, while I find that the "interesting debates" are on such impro-

per subjects, I shall use my utmost endeavours to persuade the wives of other medical gentlemen to keep the "members" at home, where they may learn quite as much without being corrupted by the indecorous remarks of those who would persuade them to stay out at nights.

Your obedient servant,
LUCINA.

HOSPITAL REPORTS.

HOTEL DIEU.

Fracture of the Vertebral Column— Symptoms of Compression of the Cord —complete Recovery.

EXAMPLES of complete recovery after fracture of the vertebral column, are rare; we therefore give insertion to the following, which has very recently occurred in the Hotel Dieu, Paris.

L. Jean-Marie, a mason, aged 28, of sanguineous temperament and robust frame, was admitted at the above hospital Sept. 3. On the 27th of August he fell from the second floor of a house, and fractured his back, at the site of the tenth dorsal vertebra: the existence of fracture was ascertained by M. Bernard: the patient had been bled four times during six days, by a medical man who was called immediately after the accident. At the moment of the fall he became insensible, but this state soon passed away, and it was not till the second day that signs of compression were evinced by paralysis of the left inferior extremity, at which time symptoms of inflammation had come on. On his arrival at the Hotel Dieu he was bled again.

Sept. 4.—At the visit to-day the fracture of the vertebral column was manifested by a considerable projection of the last dorsal vertebra, which formed a curve of three inches, the convexity of which was towards the right, and, of course, the concavity to the left. No attempt was made to verify the existence of fracture, by producing crepitus, as it was feared by so doing the fragments might be thrown into a less favourable position. The left leg was without sense or motion; the right retained its functions, as did the bladder and rectum. The patient was placed in

a position as nearly horizontal as possible, the loins being supported on a hollow pillow. A sheet was folded like a cravat, and passing across his chest, was fixed to the bars of the bed, so as to retain him in the recumbent posture. During the night (4-5th) he had delirium, with febrile reaction. He was bled to the extent of three palets, and twenty-five leeches were applied in the course of the jugulars.

5th.—The patient calmer, notwithstanding which a strait waistcoat, which had been put on the preceding night, was retained. He was cupped on each side of the spinal column, at the seat of injury.

7th.—The cerebral symptoms gone, but the paralysis of left lower extremity continues: cupping repeated as before.

From this time gradual improvement took place, but the patient was rigorously prevented from moving, and no examination of the fracture ventured upon. By degrees the sensibility and power of motion returned in the paralyzed limb: by the end of September the former was nearly restored, but the latter came more slowly.

Oct. 14th.—The sensibility and power of motion are now nearly the same on the left side as the other: the projection of the vertebræ, though still perceptible, is much less than before. He has not yet been allowed to move from his bed, but his recovery is regarded as secure.—*La Clinique.*

WESMINSTER HOSPITAL.

Retention of Urine.

ROBERT BURROWS, æt. 30, admitted under Mr. White, with retention of urine, the evening of October 17.

This patient had a gonorrhœa two years ago, and was in the habit of passing a bougie himself. He had at this time, for a few days, great difficulty in voiding his urine. Three weeks back he perceived he had a fresh attack of gonorrhœa, and he again began to pass his bougie. On Friday Mr. White saw him, and with some difficulty passed a gum elastic catheter, and relieved him. At one o'clock on Saturday morning Mr. White was again called to him, and passed a small silver catheter. He saw him during the day, and attempted in vain to get into the bladder; there was evidently inflammation, and great irritation of the whole canal. He was admitted into the hospital in the evening, not having passed any water for eighteen hours.

He was bled immediately to ℥xvj . He complained of being in great pain; bladder moderately distended, and painful on pressure; pulse regular, but hard; countenance anxious. He was put into a warm bath for half an hour, and immediately after he was taken out, ten grains of *Pulvis Ipecacuanhæ c.* were administered. This he vomited; it was therefore repeated in a short time, when it was retained. An enema, with house medicine, was also given.

Eleven, P.M.—He has had two doses of the Dover's powder, and been again into the bath until he nearly fainted. A catheter was endeavoured to be passed very gently, but after a short time the attempt was given up. The instrument was stopped by a stricture about three inches down the urethra. Ordered fomentations and *Pulv. Ipecacuan. c. gr. x.* every hour. Injection to be repeated.

18th, ten A.M.—At two o'clock in the morning he passed about three ounces of water, from which he received great relief; and at three o'clock about two ounces more: he then seemed disposed to sleep. He has had the injections repeated thrice during the night, and continued the powders. He is in less pain this morning than last night; tongue clean; bowels have been tolerably freely acted upon. Complains of pain on pressure of the abdomen; but the tenseness and tenderness of the perineum are in some degree diminished; he is not aware of having passed any water since three o'clock. Mr. White has just seen him, and ordered the fomentations to be continued. Powders omitted for the present, and 20 leeches to be applied to the perineum. His head has been slightly affected by the powders, and during the night he vomited once.

Vespere.—Mr. White has succeeded in passing a small flexible catheter into the bladder, and about a quart of strongly ammoniacal urine has been withdrawn. The catheter is fastened in. The tumefaction and tenderness of the perineum and penis are considerably diminished.

19th.—He is free from pain; the catheter is kept in; his bowels are rather confined; tongue pale, but clean; pulse natural, and no pain on pressure of the abdomen. He says there is considerable discharge from the urethra.

20th.—Going on well.

21st.—The catheter is still continued in; he complains of pain in the perineum, and there is some appearance of a small abscess forming.

Ol. Ricini ℥iss. st. sumend.

23d.—He has had a poultice applied to the perineum; complains of great pain at that part.

24th.—The abscess has broken; he is much relieved. The catheter has been removed; it had become clogged with mucus.

25th.—He passes his urine very freely—more so, he says, than he has done for a long time; and is free from pain of any kind.

Disease of the Stomach—Ejection of a singular mass by Vomiting.

Susan Hickman, æt. 43, admitted October 21, under Dr. Roe.

This patient states that she has enjoyed good health until within the last five years, not recollecting any severe illness. She has never had any family, and is not married; her constitution not very strong. She commenced menstruating at the age of 20, and continued to be very regular till five years ago, when her menses stopped entirely: her periods occurred every month, and with great regularity; a fortnight after the last she was seized with a continual sickness, and after a time had very severe vomitings. Soon after this she felt her stomach very sore, and had a difficulty of swallowing hard food; in attempting to do so, she felt it stick near the end of the œsophagus, then proceeding a little lower, and at last, when fairly in the stomach, giving her pain, as though it was passing the whole length of the viscus. In vomiting there seemed to be the same obstruction at the cardiac orifice, and a little higher in the œsophagus. Sometimes, in swallowing, the food arrived at this point, and was then rejected; liquids, or soft moistened food, passed without the same difficulty. She was admitted about this time into the Westminster Hospital, under Sir G. Tuthill, but remained only a week; and when she went out says she was in some degree relieved. About a year after this she came a second time, and was again admitted under Sir George Tuthill. She remained nearly five months, suffering severely from pain in her stomach, violent vomiting, and severe cough. She then went out, still suffering, in a less degree, from the same symptoms. She has never, since the first attack, been more than a day free from vomiting, and always brought up a yellow mucilaginous matter; more frequently three or four times a day, generally after eating, and sometimes without. She states that her whole food, for the last four years, has consisted of beef-tea, mutton-broth, water-gruel, and arrow-root.

On Tuesday, October 20th, in the evening, she had a severe fit of vomiting, and felt nearly choked, when a yellow body, resembling a fish in form, was thrown up, and fell upon the floor: the people *swear* it moved for some seconds afterwards, but it is evidently impossible. It is merely a mass of disorganized matter, matted and rolled together into the form described. It is about five inches long, tolerably smooth and compact; one extremity very much resembling the head of a fish, having also two black specks in the situation of the eyes.

She has felt greatly relieved ever since, experiencing scarcely any pain in her stomach, and swallowing bread without any difficulty. She was very sick during the whole of next day, but has ever since been totally free from sickness.

She has a very small thin pulse. Her bowels have generally been very relaxed, but are confined this week. She has been subject for five years to a severe cough, and some difficulty of breathing, which increases at different times. She has also, during that time, made a larger quantity of urine than natural, but can give no precise idea of how much; and states, also, that during fits of coughing, the urine is expelled involuntarily. She refers all her ills and complaints to precisely the same period five years back, but it is doubtful whether her accuracy may be fully depended upon.

GUY'S HOSPITAL.

Large Fungoid Excrescence in the site of a Cicatrix—Removed.

THOMAS MEDHURST, aged 35, formerly a sailor, was admitted into this hospital on the 16th September last, under the care of Mr. Key, for the treatment of a hard tumor, with fungoid excrescence, situated across the front of the thigh, close to the knee. He states that 15 years ago, when at sea, he fell violently against a beam and struck his thigh; the immediate effects of this bruise soon subsided; but about two years and a half after this he perceived on the spot a small hard cutaneous lump, unattended at first with pain. It gradually increased in size, until it gave rise to shooting pains, which were always worse at night.

Three years ago this was removed by the knife, and the wound healed very well; notwithstanding which ulceration of the cicatrix took place six months afterwards, when the disease recommenced, and has gradually increased to its present state, viz. a hard subcutaneous tumor, about four inches long, and about half as broad, with a fungoid ulceration the size of a shilling over it, and a warty excrescence, with a narrow base, close beside. These bleed on the least irritation, and generally emit a most fetid discharge. The tumor is moveable on the muscles, but not to any great extent; it does not affect, nor is it in the least affected by the motions of the limb. He experiences severe smarting and occasional lancinating pains in it, which are so aggravated at night as to prevent him frequently from getting any rest. His general health has been always good.

29th.—To-day the operation for extirpating the disease was practised. A transverse incision, above and below it, included in the

ellipsis the parts to be removed; these were carefully dissected out, together with the fascia covering the muscles, to which they were found connected. Several vessels that bled pretty freely at first were closed by simple pressure with the finger. Thirty drops of laudanum were administered, a wet cloth placed on the wound, and the patient carried to bed.

In the afternoon bleeding came on to so great an extent, that it became necessary to tie two vessels, which, with the application of cold, succeeded in putting an entire stop to the hæmorrhage.

For the first two or three days poultices were applied. A slightly unhealthy appearance of one of the edges was speedily corrected by means of the nitric acid wash, and the limb rolled from below the knee to the thigh, so as to approximate as much as might be the upper and lower lips of the wound.

October 20.—He has not had a bad symptom; the intervening space is now covered with healthy granulations, and there is every reason to expect a speedy and permanent cicatrization.

The tumor removed was very similar to those usually found in the mammae, and when cut into, presented the characters of that fungoid form of malignant disease so well described by Dr. Hodgkin as consisting of a number of little cysts, arising from within a large cyst, and there accumulating themselves until they become so altered and hardened, that the minute structure can with difficulty be recognised; at which period the disease may be known by the bands of glistening fibres shooting irregularly across various parts of it.

Case of Paralysis of the parts supplied by the Portio Dura.

Robert Wheeler, ætat. 6, was admitted into Dorcas' ward, 16th Sept. 1839, under the care of Mr. Key. His mother stated that four years ago, he had "fits;" since which time, however, he had enjoyed good health, till three weeks since, when, on his awaking from sleep, she observed his face to be distorted.

The muscles on the left side of his face were firmly contracted; while the opposite cheek was rotund, and had little power of motion. It does not appear that the patient had any discharge from his ear, or that the portio dura of the seventh pair had received any local cause of paralysis. The paralysis of the muscles has gradually increased, and now affects the buccinator to the angle of the mouth, and right nostril, and partially the orbicularis palpebrarum. There is a puffiness over the right eye-brow. He was apparently in good health at the time of the attack, and he now looks well. His

bowels have been constipated, and are with difficulty excited.

Pil. Hydr. Subm. Co. gr. ijss. omni nocte.

App. Emp. Lyttæ zygomati, et fiat ulcus.
Ol. Ricini, mane sum p r. n.

Oct. 7.—The blister, at the side of his face, has just healed, having been kept open till now. The improvement is very manifest, though the right cheek is still drawn considerably towards the left side when he laughs. He can just direct his muscles to the act of whistling.

Oct. 21.—The deformity of the face is now so slight that paralysis of the right side is only observable in the convulsive action of laughing or sobbing. He has omitted the plummers pill, and is in very good health.

ST. BARTHOLOMEW'S HOSPITAL.

Amputation of the Penis very far back.

PURCHASE WARREN, ætat. 60; admitted into Darker's Ward, October 8th, with an extensive ulceration of the penis of a carcinomatous character. The account he gives of its progress is as follows:—About the month of March, 1827, he perceived a small hard spot on the glans penis, in the exact situation where a chancre had healed about eight years previously. He took mercury for a short time: it slowly increased in size, bearing some resemblance to a small strawberry, but was unattended with pain till about three months back, when, in consequence of its magnitude, a surgeon slit up the prepuce. A slight discharge from the surface of the ulcer had taken place before this, and continued increasing in quantity; the blue pill had been renewed for some time, and he had rubbed in mercurial ointment, and applied black wash: his mouth had been slightly affected. Since the division of the prepuce the ulceration has gradually extended, destroying the glans penis, corpora cavernosa, and urethra, till the mass of disease projects very little beyond the os pubis. Its appearance on admission was,—the surface ragged and fissured, with the edges of the ulceration everted over the body of the penis on each side and below. From this surface, and particularly from a sinus burrowing deep into the mass, a foetid sanies constantly flowed. A slight enlargement of one of the glands in the left groin is felt, but his general appearance is tolerably healthy. He has a small scrotal hernia on the right side, and the whole scrotum is thickened and inflamed on its surface.

The opinions of Messrs. Lawrence and Vincent coincided with that of Mr. Earle, that the prospect of permanent relief from

amputation were uncertain; yet as all agreed that the disease must destroy him if not arrested, Mr. E. decided to perform the operation on Saturday, October 10th.

An incision was commenced at the root of the dorsum of the penis, and carried down on the left side into the scrotum between three and four inches in length; a corresponding incision was made on the opposite side to meet the former, including between them an elliptical portion. Mr. E. then found it necessary to extend this incision completely through the scrotum, and after some dissection, laying bare the tunicae vaginales, the penis and ulcerated tumor being isolated beneath the pubes, a tape was tied firmly round the body of the organ, and a division through the latter made close to it: at this juncture the tape slipped off, but the vessels were notwithstanding secured, and the ends of the ligatures cut off close; the surface of the wound appeared perfectly healthy, as also the posterior extremity of the amputated portion. An elastic gum catheter was passed, the edges of the wound brought together by sutures, and the scrotum approximated as much as possible to the commencement of the incisions. Two or three straps were passed lightly across the line of the wound, and wet lint ordered to be applied constantly. For the first two days considerable irritation and restlessness manifested themselves; the bowels were freely evacuated, and salines with antimony ordered.—On the 12th the wound looked well, and healthy pus oozed from between the straps; they were raised and a poultice applied. He had passed a bad night, his sleep having been disturbed by a troublesome cough. In the evening he was improved in every respect.—14th, Very comfortable.—28th, Going on very well; healthy granulations have filled up the situation of the penis; the thickening of the scrotum has subsided, and the hernial sac is well covered by the right side of the scrotum. The urethra opens into the lower part of the scrotum, and its present orifice is full two inches from the surface. In the progress of the case, it will be interesting to observe what changes occur towards effecting the continuation of the canal. No contraction of the divided extremity of the urethra has taken place at present.

Warren states very decidedly that he had no natural phymosis, or even approach to it.

EDINBURGH ROYAL INFIRMARY.

Cases of diseased Testicle.—Castration.

CASE I.—James Calder, æt. 28, admitted under the care of Mr. Liston, April 30th. Had the left testicle removed twelve months ago, and soon afterwards the right became

enlarged. Its increase was at first slow, but during the last three weeks the gland has enlarged rapidly. A great variety of applications have been employed.

It has now attained considerable size, and is hard at the centre. The surface of the scrotum is irregular, and, on pressing the tumor, purulent matter escapes from two sinuses which extend about an inch into the swelling. The cord appears healthy; urethra sound.

May 1st.—The sinuses have been freely laid open.

May 17th.—Several abscesses have formed in the tumor, and fungi protrude from the former incisions; the patient's health declines, and he is anxious that the testicle should be removed.

May 18th.—Castration was to-day performed. The scrotum surrounding the testicle was consolidated, and the substance of the gland was uniformly diseased, and of a distinctly scrofulous character.

No bad symptom supervened; the wound healed by granulation; the patient recovered strength speedily, and in a short time was dismissed cured.

CASE II.—Thomas McLaren, æt. 25, admitted under the care of Mr. Liston, May 29th. Has had gonorrhœa. About seven years previous to admission, his right testicle was bruised, and became swollen. It continued to enlarge, unattended with pain, till about three years ago; since which there has been no increase of the tumor. During the last three weeks, blisters and mercurial ointment have been alternately applied to the scrotum. The testicle is of the size of a turkey's egg, and is painful on pressure. Urethra sound.

June 6th.—Fluctuation was distinctly felt in the tumor, and, on a small opening being made, a quantity of dark, foetid fluid escaped.

June 8th.—Inflammation has supervened; the scrotum is swollen, and of a livid colour, and the patient has pain in the back, nausea, restlessness, and nocturnal sweats.

June 10th.—As fluctuation was again perceptible, an incision was made, and a considerable quantity of fluid evacuated.

June 14th.—A fungus occupies the wound, and the patient's health declines daily.

June 16th.—The testicle was removed yesterday. The epididymus was enlarged and indurated, and contained pus. The greater portion of the testicle was of its natural appearance, but the tunica vaginalis and albuginea were thickened and adhering to each other. The subcutaneous cellular tissue of the scrotum was infiltrated with lymph and pus. The fungus was connected with the epididymus, in which the disease appeared to have commenced.

June 20th.—An abscess formed over the

cord, and was opened. An incision has been made into the cellular tissue, which had become infiltrated with purulent matter. Healthy discharge from wound, which is cicatrizing. Health good. Was dismissed cured.

CASE III.—David Baird, æt. 31, admitted under the care of Mr. Liston, June 16th. Four years ago had a slight attack of gonorrhœa, and, two years previous to admission, he injured his right testicle while dancing, and the gland became enlarged. It is now extremely hard, and on the lower part of the scrotum there is a small sore, from which a sinus extends apparently into the substance of the gland. The cord appears natural; urethra sound; health good.

June 20th.—The testicle was removed yesterday. It was of a distinctly scrofulous appearance. Considerable hæmorrhage afterwards occurred; an artery was secured, and the wound stuffed with charpie.

June 23d.—There is slight œdema, and considerable redness, extending upwards from the wound; and, on pressure, a quantity of foetid matter escapes. A free incision has been made into the part.

June 24th.—He complains of but little pain, and the discharge from the wound is healthy.

From this date the cure proceeded favourably, the wound healing by granulation.

CASE IV.—James Heatly, admitted under the care of Mr. Liston, July 7th. Had been previously admitted into the Infirmary, affected with disease of testis, and been dismissed at his own request.

His testicle is of nearly the same size as when formerly admitted, but there are several sinuses leading into the gland.

July 10th.—To-day the testicle was removed, much indurated and altered in structure. After the patient had been put to bed, smart hæmorrhage occurred, and several arteries were secured.

July 13th.—The wound looks well. Health and appetite good. This patient also recovered, without the occurrence of any untoward symptom.

CASE V.—W. Angus, admitted under the care of Mr. Liston, August 6th.

Twelve months ago, a swelling appeared on the lower part of left side of scrotum, and gradually increased in size. An opening was made into it, and much blood, with a small quantity of serum, was evacuated. Of late the tumor has enlarged rapidly; its surface is uniform, tense, and elastic; and fluctuation is distinct at its upper part. Veins of scrotum somewhat enlarged. Urethra sound. Complains of slight pain in the back.

June 8th.—To-day a trochar was inserted, but only a few drops of a dark fluid escaped. The testicle was then removed. On account of the very large size of the tumor, the cord was necessarily divided close to the inguinal aperture, and escaped from the fingers of the assistant. The external ring was divided, and the spermatic artery secured. No sponges were employed to arrest the hæmorrhage, *as has been elsewhere erroneously stated.*

The cavity of the tunica vaginalis contained a small quantity of serum, and the tunica albuginea was thickened. The gland was greatly enlarged and indurated, and composed of numerous dense, irregular cysts, containing a glairy fluid, except at its centre and posterior part, where the substance of the tumor was vascular, pulpy, and of the encephaloid structure.

August 9th.—Has slept pretty well. Little pain of wound. Complains of head-ache. Tongue foul; bowels constipated; no pain of abdomen.

Evening.—One scanty stool has been procured by a purgative enema.

August 10th.—Was restless during the night. The wound is painful; emits a thin fetid discharge; the surrounding skin is of a dusky red colour, and presents an obscure sense of fluctuation. An incision was made, and a quantity of fetid pus evacuated. Bowels not moved; tongue foul; pulse rapid; no pain of abdomen.

Habeat statim Pil. Hydrag. gr. v. et Pil. Aloet. gr. x.

Two enemas were administered in the afternoon without effect. In the evening he had ℥ij of croton oil, with a large enema, containing ℥viii. of the same purgative, but no stool was procured.

August 11th.—Had some vomiting during the night, which was checked by an opiate. Towards morning he complained of pain in the epigastrium, and the abdomen was somewhat distended. Leeches were applied to the epigastrium, and he retained 3j. of Epsom salts in his stomach. His pulse suddenly fell; his countenance became anxious, his breathing was very laborious, and the distention of the abdomen had much increased. Took some wine and camphorated emulsion. In the evening he rallied a little, and had a turpentine enema, which procured a dark fetid stool.

August 12th.—This morning had some calomel and opium, and a purgative enema in the evening. His bowels were opened freely, but the distention of the abdomen continued. His pulse became very feeble, vomiting recurred, and could not be controlled by the various remedies employed. He sunk on the 14th.

The friends would not allow the body to be examined.

GLASGOW ROYAL INFIRMARY.

Effects of Iodine on Bronchocele.

JAMES CARRUTHERS, æt. 46, an umbrella-maker; has resided all his life in Glasgow; was admitted by Mr. Cowen on the 18th of February. The anterior and lateral parts of the neck are occupied by a tumor as large as a child's head. It extends from the hyoid bone downwards to the junction of the first rib with the sternum. Towards the left side it passes no further than the outer border of the mastoid muscle, but on the right side beyond this, it has pushed the carotid artery considerably outwards and backwards. The tumor is firm and resisting, and gives little uneasiness, except from impeding respiration. Of late, he has much fallen off in strength. Countenance sallow; has a slight cough; appetite bad; some thirst; bowels lax; pulse 80. It is twenty years since the swelling was first observed, but it had increased so slowly, that, fourteen months ago, it was no larger than a goose's egg. Since then, however, it has increased rapidly. On admission, he was put upon a course of medicine to regulate the stomach and bowels.

25d.—R. Hydriodatis Potassæ 3ss. Ung. Simp. 3j. M utat. 3j. o. nocte.

27th.—He has used the whole of the ointment. The tension and size of the tumor are perceptibly diminished. Has cough, with expectoration; nausea, and uneasiness.

Omit. Unguentum.

28th.—Nausea gone.

Rept. Unguent.

16th March.—The tumor has diminished one-third by measurement. His general health, however, continues to decline; and, at his own request, he is dismissed.

LITERARY INTELLIGENCE.

Early in January will be published, in 8vo. with 14 Lithographic Engravings, *On the Diseases of the Ovaria; including Encysted Dropsy and Malignant Diseases of those Organs.* To which are prefixed, *Physiological Observations on the Structure and Functions of these Parts, in the Human Being and in Animals.* By Edward J. Seymour, M.D. Fellow of the Royal College of Physicians, London; and one of the Physicians to St. George's Hospital.

NOTICE.

Mr. White's paper has been delayed, owing to an accidental circumstance over which we have no control.

THE LONDON MEDICAL GAZETTE,

BEING A

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OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 14, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE VII.

Inflammation from Sympathy.—Disorder of the Digestive Organs.

I HAVE hitherto spoken to you, gentlemen, of inflammation as brought on by causes that act immediately on the affected part; either by such as essentially and necessarily produce that action, in some degree, wherever they are applied, or by such as produce it only in individuals that are predisposed to their agency; and I have mentioned as the most powerful of the circumstances which give a predisposition to inflammatory disease, that state of fulness of habit which is called plethora, and which is brought on by excessive nutrition. Now there are other and numerous cases in which we can observe no direct application made to the affected part; but we discover the existence of disturbance in other quarters, and we find in many cases that the removal of those disturbances brings with it the cure of the inflammation; thus we are led to consider the inflammatory affection as the consequence of the disturbance existing in other parts. The former are cases of what would be called *idiopathic* disease—in which the cause is directly applied; the latter are *sympathetic*, that is, dependent on the previous existence of disease in some other part.

Now I shall just exemplify this sympathetic occurrence of inflammation by certain cases, which will shew you how it takes place. I had a gentleman under my care, who laboured under an affection of the glands of the axilla. He was a young man who had been accustomed to free living, and he did not submit very willingly

to those restraints of diet which his case required. One day, feeling himself low and weak, he thought that a good meal would benefit him, and so he took a hearty dinner and some wine, in opposition to the injunctions that I had laid upon him. He found himself none the worse—perhaps rather the better, and this induced him to repeat the indulgence. On the following day he again took a full meal, and drank some bottled ale with his dinner, and, as he himself acknowledged, about a pint of port wine. This disordered him very much; he passed a bad night, and felt very unwell on the following day; in the course of eight-and-forty hours he became excessively ill indeed—he was hot and very restless, with a full tense pulse, and violent pain in the neighbourhood of the local disease. He sent for me early in the morning, when he presented a specimen of the most violent erysipelas of the skin I ever saw; from the shoulder down to the elbow, the skin was a most vivid red, and beset with those minute vesicles which belong to that kind of inflammation. Here, you will observe, that there was no direct application capable of exciting disease made to the part in which the erysipelas took place: it was a sympathetic effect, so far as the skin went, consequent on a disturbance produced in the digestive organs by imprudence in diet.

I removed in this hospital a loose portion of cartilage from the knee joint of an adult man. At the end of four or five days it appeared that the incision, which had been made into the joint, to remove the loose body, was healed by adhesion: but, in a way that I could not account for, hæmorrhage subsequently took place from the wound, and a layer of coagulated blood was formed; the adhesion that had occurred was separated, and the main object of the operation was frustrated. The consequence was, that an inflammation occurred in the joint, and suppuration taking place, the patient became very ill, and after lingering for some time he died. On opening the body I found inflammation of the

liver and intestines; there were numerous depositions, partly of a purulent nature, and partly of a substance like lymph, in masses, varying from the size of a pea to that of a hazel nut: one such existed in the substance of the brain. In a case of inflammation of the vein of the arm, consequent on bleeding, which was under my care—a case which is technically called phlebitis—there was great distention of one of the knee joints previous to death. On examining the patient afterwards, there was found to have been violent inflammation there, with suppuration of the joint, which was distended with matter, and an immense quantity of coagulable lymph about the muscular fibres of the anterior part of the limb. In another instance of a similar kind, I found inflammation of the pericardium, with fluid in the cavity; and also—a singular appearance—a deposition of pus in the muscular substance of the heart.

This kind of occurrence is not very rare; and there is a paper contained in the 15th volume of the *Medico-Chirurgical Transactions*, stating a great number of cases in which serious inflammatory affections of various internal organs were found in conjunction with severe external inflammations; the internal parts affected were the peritoneum, pleura, and pericardium (three serous membranes), with inflammatory deposits of pus and lymph in the lungs, liver, and spleen; inflammation and suppuration in the cavities of certain joints; and also, in one or two instances, a deposition of pus in the way that I have already mentioned—in the cellular substance, between certain muscles.

Again a patient may have gonorrhoeal inflammation of the conjunctiva without our being able to discern any particular application to the eye; or he may have violent ophthalmia, and this be followed by the sinovial inflammation of the various joints.

These, you observe, are different from the preceding cases, in all of which we could detect the application to the inflamed part of some direct cause of disease. But, in the various instances that I have now recounted, no direct agency can be traced to the part that is the seat of the complaint; and if there is any mode in which we can account for those inflammatory changes in the instances referred to, it is through the indirect and sympathetic influence exerted on the parts by diseases existing in some other organs of the body.

The reciprocal influence which the head and the viscera in the abdomen exert over each other, forms a good illustration of the subject of sympathy, and constitutes, in fact, an inquiry of considerable practical importance. When a person has received a violent injury of the head, nothing is more common than for sickness to ensue, and the contents of the stomach to be ejected by

vomiting; if this does not take place, the patient probably loses his appetite, and becomes costive. If a person in perfect health receive a piece of very bad news or afflicting intelligence, it will entirely destroy the appetite. I have known a gentleman just on the point of sitting down to dinner, in perfect health, receive a piece of news of a distressing kind, and be utterly unable to take a mouthful of food. The state of the stomach is equally capable of exerting an important influence upon the head: thus it is known that worms in the alimentary canal, particularly of a child, are capable of producing convulsions. A state of disorder in the stomach, and other parts of the alimentary canal, in children, will produce disease in the head, bringing on all the external appearances of hydrocephalus. In severe injuries of the head, it has sometimes been found that the liver is the seat of abscess—or rather of the deposition of pus to which I have alluded. On the other hand, the terms *hypochondriasis* and *melancholia*, which are applied to certain states of mental feeling, clearly shew the opinion that has been entertained respecting these affections, as either originating from, or being immediately connected with, the organs contained in the abdomen, particularly the liver. *Hypochondriasis* and *melancholia* are ancient terms, and no doubt were applied to express the connexion between certain states of the liver, or other abdominal viscera, and this condition of mental feeling. In cases of jaundice, every one knows that there is a remarkable degree of languor and dejection.

When you consider the great extent of the digestive apparatus, taking the alimentary canal and the various parts that are subsidiary to it—when you remark the organization of these parts, the copious supply of blood which they receive, and the very important nature of the offices they execute, you will not wonder that they are the seat of a very important set of symptoms. We find, in fact, that nearly all parts of the body are capable of acting sympathetically on the digestive system; and, reciprocally, that these organs are capable of affecting almost all others.

Disturbance of the digestive organs is capable of affecting sympathetically all the other parts, so as to produce inflammation, more or less violent—ulceration, thickening, induration, and various kinds of disorganization. There can be no doubt that to these sources we must refer a considerable portion of those local diseases which, in common language, are said to arise spontaneously—a considerable portion of those diseases, the origin of which cannot be accounted for by the immediate application of any cause. The digestive organs have to perform the important office of preparing

the supply of new materials for the growth and repair of the body. They also remove from the system the residue of alimentary matter after the nutriment has been extracted from it. If healthy supplies of new matter are introduced into the frame, all the animal actions, whether bodily or mental, are carried on with vigour; the body is active, the mind is alert; and a general feeling of health pervades the whole frame. But if the nutritive system is disturbed, if the alimentary canal is loaded with undigested matters, and unhealthy secretions, then materials of disease rather than of health are distributed over the frame; and we cannot wonder that every part of the body should suffer. Every organ may be disturbed, and the mental functions deranged under such circumstances. It is probable, in this point of view, that even character and manners may in some measure be affected by the mode in which the functions of the digestive organs are carried on. This truth seems to have been perceived even by those who have not made medicine a direct or immediate object of study: at all events, the point is handled with a curious mixture of drollery and good sense by Voltaire, in an article in which he has illustrated various philosophic doctrines, and which is entitled "*Ventres Paresseux*"—Costive Bellies. He says that the character and turn of mind in an individual depend very much on the way in which the bowels perform their office; that if a man is costive, his bile is not discharged, but falls back into his blood, and that this renders him choleric. This, to be sure, is not an example of good physiology, but you must understand that this was considered good physiology by medical men at the time that Voltaire wrote. He mentions that Cardinal Richelieu laboured under inward piles, which obstructed the lower bowels, and produced constipation. Owing to this, says he, the Cardinal became cruel; and thus he accounts for the sanguinary disposition occasionally evinced by this eminent statesman. He says that the Queen Anne of Austria was accustomed to call him by the name "*cul pourri*," which we cannot translate into decent English. Voltaire adds, that "if a person should have to ask a favour of a minister, or of his secretary, or of his kept mistress, he should endeavour by all means to ascertain whether they go regularly to the close-stool. If possible, he should select for the time of preferring a request the period immediately after the individual has had a comfortable evacuation, for it is a remarkably propitious moment: it is one of the *mollis faudi temporu*, which ought always to be seized, one in which a man is in good humour with himself and all around him.

Now since disorder of the digestive organs

is sympathetically a cause of many local effects, and since the efforts for their cure will depend materially upon our success in discovering the cause, and in applying suitable remedies, it is necessary to inquire a little more particularly into the mode in which such derangement takes place, and into the circumstances which denote its existence.

We find, in the first place, that all kinds of serious external injuries are capable of producing sympathetic disturbance in various parts of the alimentary canal; and that pain and tenderness in the hypogastric region, thirst, diminished appetite, costiveness, and increased frequency of pulse, with heat of skin, very remarkably, attend such accidents. Thus they form an assembly of symptoms, constituting a kind of fever; these circumstances being, for the greater part, immediately referable to the disorder I have just mentioned. We find, also, that every considerable local disease, as well as external injury, is capable of acting sympathetically on those organs. A knowledge of the disorder which is produced is a considerable step towards the cure of the injury or primary disease itself. However, the most frequent cause of disorder of the digestive organs is, unquestionably, excess of nutrition, which I have already had occasion to allude to as being the immediate source of that state of plethora, which constitutes the predisposition to local inflammation. The excessive supply which is introduced into the system, under such circumstances, is attended, in the first instance, as I have already observed, with a more vigorous exertion of the various organs of the body; there is, in fact, an actual increase of the various functions, producing what seems for a time to be a remarkably healthy state. We soon see, however, that this is changed into a condition bordering on disease; that the individual so circumstanced has a full and strong pulse, heat of skin, and headache; and that perspirations are easily induced by exertion. He has a white tongue; and, in fact, he passes into a state closely allied to disease, although it is still called health. This condition of plethora, or an unnaturally full state of the system, may, as I mentioned, be regarded as the first step in a deviation from the healthy state; it is a condition in which disease will easily be induced, and in which, when induced, it assumes a very active inflammatory character. It is pure, simple, or common inflammation which occurs under such circumstances; that is, inflammation arising from the excess of nutrition in an individual who is otherwise healthy. Now, if the same cause continue to act—that is, if to the system, which is already overloaded, fresh supplies are continually added, then the condition of the organs begins to be altered; they are unable to dispose of the matter thus brought in;

they get out of order; and the individual soon passes into an unhealthy condition. You will naturally expect that the functions of the stomach into which the food is taken, should be immediately deranged; in fact, digestion is first impaired under such circumstances: and the actions of the absorbent, the nervous, the chylopoietic, and the vascular systems, are subsequently disturbed. The fecal and urinary discharges become deranged in various degrees, and you have symptoms proving the impaired performance of these actions, by which the residue of the alimentary matter ought to be removed from the system. You find, perhaps, a foul and loaded state of the tongue; not unfrequently a kind of voracious appetite; costiveness; and the motions, when obtained, dark and unnatural in their appearance. The urine is deficient in quantity, high coloured, and turbid; the skin is sallow, harsh, and dry; and occasionally even an unpleasant sort of perspiration is produced.

Now in the first of these two states there is plethora from an excess of nutrition,—an overfulness, from the effect of an improper quantity of aliment being taken into the body. In the other case the principal source of disease is a defect of excretion. The second condition is beyond a state of mere plethora—it is plethora, with defective secretion added to it. These terms may serve, in a general way, to characterize the two conditions I have just alluded to—plethora from excessive nutrition, and plethora with defective excretion. These states have been spoken of by Dr. Barlow, who endeavours to investigate what appears to me to be an important point—namely, the mode in which health passes into disease. He has attempted to trace the state which intervenes between health and the development of disease in its obvious and recognizable form; and it must be very clear that in order to understand the way in which disease is produced, and may be recognized, such investigations are of great importance. Dr. Barlow has published his views in a series of papers, which you will find in the 9th and 10th volumes of the Edinburgh Medical Journal; and he has also published them partly in an essay on the Bath waters, together with some remarks on the physiology and pathology of the human frame, printed at Bath in 1822. It was only lately that I had an opportunity of seeing the writings of Dr. Barlow; and I was much pleased to find, in perusing them, that there was a coincidence between his views and those I myself had been led to entertain upon the same subject. I find that Dr. Barlow and I have not only taken up the same views, but what is still more singular, we have expressed ourselves in nearly the same language:—I was pleased to find that my own notions

were confirmed by the sanction of so intelligent an observer. I think that Dr. Barlow would confer an immense service upon the profession if he were to put into one volume the matter which is scattered through the works that I have referred to.

It is necessary, however, to go a little more minutely into the symptoms of the condition I have just mentioned, more especially as they appear in the particular parts of the digestive system; but it will not be requisite to detain you at great length on the subject.

In the stomach we observe, under the circumstances alluded to, that certain uneasy sensations are produced; after taking food, a sense of weight, and other unpleasant effects, are often experienced. We find, after this, a defect of appetite, with flatulence. In other cases an unnatural desire for food comes on, and, although what is taken is not properly digested, yet there is a constant desire or craving for food, that leads the individual to add to the load by which the organs are already oppressed. In the intestines we notice an irregular performance of their functions—very commonly a state of costiveness; and this is succeeded by, or perhaps alternates with, diarrhoea. Sometimes the intestines contain an accumulation of feculent matter, so that a large quantity is lodged in them, and continues there for a considerable length of time. This will occur although the patient has regular motions, and it is by no means uncommon for a considerable quantity of matter to remain in the alimentary canal notwithstanding.

When we regard the size of the liver; when we look at its complicated structure; when we see the great peculiarity by which the blood that has circulated through the abdominal viscera,—the venous blood is conveyed so as to circulate again through the liver; we naturally expect to find that some purpose of great consequence in the animal economy is answered by this organ: but hitherto we cannot tell what it is, nor can it be said that we have discovered in the liver any purposes of importance that seem to explain the design of its peculiar organization. It has been discovered that the colour of the fecal evacuations depends on the admixture of bile, and therefore it has been imagined that the appearance of the motions may be regarded as a criterion whether the liver be in a healthy state or not. To a certain extent these notions may be correct, for we see, when the passage of bile into the alimentary canal is stopped, as happens in some cases, that the fecal matter has a whitish grey appearance, totally different from that peculiar brown colour which belongs to it in the healthy condition. The admixture of bile, however, is not the only circumstance which is to be regarded in considering the colour of the

evacuations; the peculiar nature of the food very often has a marked effect in this respect. A particular substance taken into the stomach will produce a corresponding appearance; it is well known, for instance, that steel medicines make the stools black, and that taking a quantity of stewed spinach will make them green. There can be no doubt, when we consider that the whole tract of the alimentary canal is a secreting surface, that the secretion produced by it will vary much under different circumstances. The nature and quality of this secretion, as well as of the bile, must affect the colour and appearance of the motions.

The tongue seldom presents a natural appearance when the alimentary canal is disturbed; a foul loaded state of the organ, its being covered by a kind of nasty clammy deposit, is an uniform sign that the stomach is in an unhealthy state. There are varieties in the appearance of the tongue: it does not always exhibit the same character; frequently, in those disturbances of the stomach and alimentary canal which are of long standing, it is of a yellowish brown appearance, something like buff. The white state of the tongue is not, in my opinion, to be particularly regarded as indicating disorder in the stomach. We see the tongue white, not in consequence of its being covered by any deposit or secretion, but as if from the substance of the tongue itself being rendered white. This is observed in cases either of plethora, when passing almost into a condition of disease, or in cases of active inflammatory disturbance, and is an indication of those states rather than of particular disturbance of the stomach. It is a tolerably unerring criterion of the existence of inflammation, and it may be considered as a sign that we ought to bleed those individuals in whom it is noticed. Whenever the functions of the stomach, liver, and alimentary canal are impaired, you must carefully examine into the state of the urine; to find if it be properly secreted, or if it be altered in quantity or in quality. It is the office of the kidneys to separate from the blood a considerable part of what we call the residue of the alimentary matter—to remove a considerable part of the food which has been carried into the lacteals, but which is not wanted for the purposes of nutrition. If the quantity and quality carried to the lacteals be unhealthy, you will have changes in the state of the urinary system: thus the urine is thick, muddy, or turbid, and a variety of changes take place which have lately been made the subject of curious chemical investigation, but we may at present take the alteration in the urine merely as an indication of the unhealthy performance of the digestive functions.

In concurrence with these circumstances,

you will find the state of the skin more or less deviating from a natural condition. There is a peculiar dingy aspect of the complexion, a sallowness of countenance, a dryness and harshness of the surface of the body generally, which form a striking contrast, both in respect to the feeling when touched, and the appearance to the eye, with the naturally soft, light reddish, and slightly moist surface of the skin. That the state of the skin is an important criterion respecting the health of the animal, is a fact known to those that take care of horses. An expert groom will tell you whether the horse be in good condition by the state of his hide; and the skin of the human body affords an equally good criterion of the state of the man.

Such are the various circumstances that point out to us the existence of those disturbances, or diseases, in the alimentary canal, or in the digestive organs taken generally, which are the source of a great variety of those local inflammations which we cannot trace to any immediate cause—to any direct agency applied to the affected part.

You will observe that the condition I have been speaking of may be regarded in two lights. You may view the matter as a general condition of plethora of the system, or you may particularly attend to it as indicating disturbance of the digestive organs: the one is more general, the other rather a more partial view of the same phenomenon. I need hardly observe that Mr. Abernethy has particularly directed his attention to the evidence of disturbance afforded by the digestive organs. Without speaking pointedly of the state of plethora of the system, he has described at considerable length the symptoms of disturbance, the mode in which it acts in producing local disease, and the means by which it may be most successfully combated. Perhaps the views which have been given by Dr. Barlow might be advantageously combined with those of Mr. Abernethy; they would, when united together, form a more complete portrait of this state of the system than if you took either of them separately.

No doubt other observers must have been led to take into their view circumstances which are really so obvious and of such common occurrence. Dr. Hamilton, of Edinburgh, in a work entitled *Observations on the Utility of Purgative Medicines*, recommends treatment essentially similar to that advised by Mr. Abernethy, but in which he has taken up the subject entirely in a practical point of view. He has not entered into a pathological consideration of the question; he has not attempted to shew the mode in which the overloading of the alimentary canal takes place, nor in what way it produces the disease, that he proposes to treat by purgatives; but has limited himself to the fact, that, in a great number of cases,

much benefit may be conferred by active purgation. In a neighbouring country (France) the attention of the medical profession has been powerfully directed to this part of the subject by an individual of great talent, who perhaps may, in some measure, have carried his views beyond what we should deem their just limits. He ascribes to the digestive organs the production of fevers. I allude to Broussais, the author of the "*Examen de la Doctrine Medicale*." He refers to diseases of the mucous membrane of the stomach a great share of all the diseases that occur in the human body. At all events, we find in his writings a considerable mass of evidence, shewing more particularly that to the active disturbance of the digestive organs are to be referred many of the diseases which are met with in France, as evidenced by examination after death, in numerous cases; a part of the subject for which opportunities equally ample have not existed in this country. I should consider, therefore, that the concurrent opinions of Dr. Barlow, Mr. Abernethy, Dr. Hamilton, and M. Broussais, all tend immediately to support each other. We cannot, perhaps, say that the opinions of any of these individuals are to be adopted to the full extent, but no doubt there is a great deal of truth in the statements of each, in as much as they arrive nearly at the same point, and this, too, by different modes of investigation. Their concurrence, so far as they go together, is a strong argument in proof of what they have deduced, and of the accuracy of their views of disease, both practical and pathological.

CLINICAL LECTURE
ON
VESICO-VAGINAL FISTULA.

By H. EARLE, Esq. F.R.S.

To the Editor of the London Medical Gazette.

SIR,

IN reply to your letter on the subject of my clinical lecture on vesico-vaginal fistula, I beg to assure you that I have no hesitation in complying with your request, if you think it of sufficient importance to interest the medical public; and have the honour to be, Sir,

Your most obedient servant,

HENRY EARLE:

George-Street, Nov. 8, 1829.

GENTLEMEN,

I wish to draw your attention to the very distressing case of Jane Latimer,

in Sitwell's ward, who was admitted in September, with a very large communication between the bladder and vagina. She states that she is 27 years old; that she had had two children. Her first labour occurred two years ago, when, after remaining three days and nights in parturition, she was delivered with the assistance of instruments, and the child was lost. She recovered perfectly from this, and again became pregnant. Her second labour occurred about six months since, and in this she lingered for three days and nights, when she gave birth to a still-born child, with the unassisted efforts of nature. In this latter labour she was attended by a female, and she affirms that no urine passed during the whole time. Some time after the child was born the bladder gave way, and a very large quantity of urine escaped per vaginam. She recovered from her confinement very well, but the urine has continued constantly to come away through the false passage. Her general health is unimpaired, and she suffers much less from excoriation than is usually the case. On a careful examination, I ascertained that there was no deformity of the pelvis to account for the difficulty experienced in her labours. On examination per vaginam, a large opening, with a lunated edge, could be felt, through which the finger could be introduced into the cavity of the bladder, at about an inch and a half from the vesical extremity of the urethra. On tracing the boundaries of the bladder, the upper edge of the opening towards the uterus could not be distinguished. The soft mucous lining of the bladder protruded through the opening, and was continued on to the neck of the uterus. Such was the impression conveyed to the finger, and subsequent examinations with the speculum proved it to be correct. In these latter examinations the increased vascularity and more villous surface of the bladder could be very easily distinguished from the lining of the vagina, which was much less vascular, and thrown into folds. The exposed lining of the bladder was infinitely less sensible than I have ever found it in other cases; and there was no injury done to the vagina beyond that portion which had been involved in the destruction of the bladder. In this respect also this case differs much from most others, in which there are generally firm cicatrised bands extending

across the vagina in different directions, and much diminishing that cavity. The opening in the bladder extended laterally above an inch and a half.

I have been induced to select this case particularly for your consideration, because most of you will probably be called upon to practice midwifery, and much important information and useful precaution may be drawn from the history which I have presented to you. In the first place you will have remarked that although the first labour was equally lingering with the second, that she was safely delivered with the assistance of instruments, without any untoward accident; whilst in the second, nature was left to perform her task without assistance, the consequence of which was the unfortunate occurrence which has reduced her to her present miserable condition, in which she must feel her life a loathsome burthen to herself and others.

It forms no part of my duty to instruct you when, and under what circumstances, you are to employ instruments and assist the delivery of your patients; you will, no doubt, receive ample instructions on this subject from your able midwifery professor. I may, however, be allowed to say, that, contrasting the results of the two labours, it would appear far better to employ instruments, than to suffer the head of the child to remain so long in its passage as to endanger the vitality of the parts on which it rested. But it may be said, that this lamentable accident need not have occurred, if proper precautions had been taken to empty the bladder with the catheter during parturition; and here I shall trespass so far on the province of your obstetric teacher, as to impress most strongly upon your minds the vast importance of attending to this part of your duty in all cases of lingering labour. You must not be satisfied with the report of the nurse or of the patient that water has passed, but you must ascertain that point for yourselves. It has fallen to my lot to witness, or to be consulted about many cases of this description: the present case makes the twenty-first which has come within my knowledge. This fact alone is sufficient to impress you with the importance of the subject, and the necessity for you to employ all vigilance to prevent its occurrence. In all these cases, where I have been able

to ascertain the particulars, the patients have either been suffered to remain too long in labour, or the bladders have been allowed to remain unemptied during parturition.

And here I would observe, that you should be provided with a catheter, smaller, and much longer than the one commonly employed for the female bladder. It often happens in these cases, that when the child's head descends, the bladder is pushed upwards above the pubis, and the urethra is much extended: in such cases you would fail to reach the cavity of the bladder with a common catheter, and you would probably be obliged to employ a small elastic gum male catheter to effect your object. A remarkable illustration, in proof of this, occurred in this hospital in the course of last summer: a young female, of 17 years of age, was admitted in even a worse state than the present patient, all the parts being in so painful and excoriated a state that she could scarcely allow an examination, and would not permit any attempts being made for her relief. In this case the medical gentleman who attended, at three several intervals of time introduced the catheter, without drawing off a single drop of urine, and none flowed naturally. There can be no reasonable doubt that the catheter never reached the cavity of the bladder, as urine flowed in abundance after delivery.

There are some other points connected with the nature and history of these cases on which I shall detain you a short time, as it may be of much importance for you to be aware of them; I shall then conclude with some observations on the means best calculated to afford relief.

I have already stated to you that in all the instances which I have investigated, this destruction of a portion of the vagina and bladder has been the consequence of the undue pressure of the head of the child, or the distended state of the bladder. I ought, however, to have made one exception, in which the fistulous opening was clearly referable to the unskilful employment of the crochet; in which, in fact, the bladder was lacerated. Now, as it may happen that in cases of this description, where instruments have been employed, questions may arise, and even be carried into courts of justice; whether the blad-

der has been ruptured by the injurious or rough employment of instruments, it will be well to offer a few observations, which will enable you to distinguish between cases of ruptured or lacerated bladder, and cases of ulcerated or sloughing bladder. The distinction is simple, but quite conclusive. In all cases of lacerated bladder, the urine would flow through the aperture at the time of the accident, and continue to do so from the immediate receipt of the injury. When, on the other hand, a portion of the vagina and bladder has perished from pressure, the patient will pass her urine for some days after her delivery through the natural passage; her discharges will be very fetid and offensive; and after the lapse of two, three, or five days, the sloughs will begin to loosen, and urine will flow through the vagina: when the sloughs are detached, they will be found thickly encrusted with calculous matter, which in some instances has led to the supposition of the pre-existence of a calculus in the bladder, and that the mischief has been caused by the bladder being compressed between the calculus and the head of the child; this, however, is clearly an erroneous opinion. It arises from the salts of the urine being deposited upon the sloughy mucous coat of the bladder. The moment any part loses its vitality, it becomes and acts as a foreign body, and forms a nucleus for the deposit of the salts of the urine. This view of the subject is further confirmed by the fact that the same incrustations are found on the sloughy portions of the membrane of the vagina, which are detached after the partial separation of the bladder has taken place. These calculous incrustations tend greatly to aggravate the sufferings of the patient.

It remains for me to speak of what remedial means we have in our power in these most distressing cases; and here I must make the humiliating confession that, in the majority of cases, little can be done to obtain a cure, although much may be effected to contribute to the patient's comfort. In calculating the probability of success from any curative operation, much must depend on the situation and extent of the injury. When that portion of the bladder has perished which is situated in the triangular space included between the termination of the ureters

and the commencement of the urethra, I fear no rational grounds of hope can be entertained of success, as the urine will flow through the fistulous opening as rapidly as it is secreted, and will effectually interrupt any healing process. Again, when the opening is in this situation, there would be danger of cutting across the termination of the ureters in endeavouring to remove the callous edges of the opening. This danger, and the difficulty of treating such a case, will be better understood by referring you to this preparation, and this drawing, which was taken from it when in a recent state. The subject from whom this preparation was removed was a young Irish woman, who came into the hospital in an advanced stage of acute peritonitis, and died the following day. She had been delivered one month, and had been attended by a drunken midwife, who suffered her to linger many days in labour, administering from time to time her favourite cordial to the patient and herself. In this case you will perceive that nearly the whole portion of bladder between the ureters and urethra has sloughed away. The bristles which are introduced into the ureters are seen immediately at the edges of the opening. It would have been quite impossible in this case to have effected any thing by operation. In this case you will likewise see the hernia of the mucous lining of the bladder, which is turned upwards, and is united to the neck of the uterus, just as I have described to be the case in the patient at present in the hospital. In the drawing the comparative vascularity, and other characteristics of the lining of the bladder and vagina, are clearly marked. In this case, also, you will observe that the mouth of the uterus has been closed by the inflammation which was produced. The uterus was distended with menstrual fluid, and it is probable that the peritonitis was excited by this obstruction, as there were much greater traces of inflammation over the pelvic viscera than in other parts of the cavity of the peritoneum. This circumstance reminds me that I had omitted to mention that in the case now in the hospital the patient has not menstruated since her confinement; but I have ascertained that there is no obstruction in the mouth of the uterus, by introducing a full sized bougie into its cavity. When the open-

ing in the bladder is situated nearer the fundus beyond, or rather higher than the ureters, there is a far better prospect of success, as in that case there will be a cavity to receive the urine, which may be allowed to flow off through a short catheter as rapidly as it is secreted. The probability of affording relief even in such a case, must, however, depend on the extent of the opening, and the degree of eversion or hernia of the bladder; and here I would observe that this eversion of the bladder appears to depend on the greater destruction of the coats of the vagina in proportion to those of the bladder. In the process of cicatrization, where there has been a large slough of the vagina, the bladder is drawn out to supply its place, and becomes firmly united and continuous with the surrounding vagina. It must be confessed, that under the most favourable circumstances, these cases present the greatest obstacles, and are certainly the most difficult that occur in surgery. I do not mention this to discourage you from making attempts to relieve patients suffering under this great calamity; on the contrary, I would strongly urge you not to abandon them, and not to be deterred by many failures. I have succeeded in perfectly restoring three such cases; in one of which I performed upwards of thirty operations before success crowned my efforts. [Here Mr. Earle gave a short account of this case, and the means he employed to effect his object.]

The sources of difficulty attending these cases are manifold. One of them has been already alluded to—namely, the continual flow of urine, and the vicinity of the termination of the ureters. Another is the very narrow space for performing any operation, often rendered more narrow by preternatural contractions, and firm cicatrized bands. A third source of difficulty in attempting any operation arises from the exquisite sensibility of the exposed mucous membrane of the bladder: next, the moist, unresisting, elastic surface, eludes the impression of any cutting instrument, the edge of which is almost immediately blunted by the action of the urine. Even when these are surmounted by perseverance, and a modification of different instruments, such is the influence exerted over the pelvic viscera by the slightest movements of the viscera of the abdomen, by the action of the

abdominal muscles and the diaphragm, that the adaptation of the denuded surface is often frustrated, and even the sutures forcibly torn away, by a single effort to cough or sneeze. In one most interesting case, which occurred in the person of a medical man's wife, where the whole urethra and neck of the bladder had sloughed away, after I had succeeded in forming a new urethra, I was repeatedly frustrated in my attempts to unite the surfaces by the occurrence of a cough or sneeze, or some action of the respiratory muscles, which was directly communicated to the bladder and pelvic viscera through the medium of the viscera of the abdomen. But supposing, that by great care and perseverance, and the perfect quietude of the patient, all the obstacles already enumerated have been overcome, and the newly paired edges of the opening have been brought accurately in contact, and firmly secured, yet you will have another source of difficulty, which may render all your efforts abortive, and this I have reserved for the last, as it is unquestionably one of the greatest magnitude.

You will have to contend with a positive law in nature which is directly opposed to the union of mucous surfaces by adhesive inflammation. You are, no doubt, aware of the salutary laws which regulate the functions of these membranes in health and disease, and are sensible of the importance of preserving all canals with external outlets free from those adhesions which so constantly occur in inflammatory affections of the serous membranes: and it is with this powerful and wise ordination that you will have to encounter, in your attempts to restore the ravages effected by sloughing or ulceration of the vagina and bladder. I need say no more to convince you of the difficulty of the undertaking; but, at the same time, I entreat you not to despair, and not to abandon your patients without some efforts to relieve them.

It remains for me yet to state what curative and what palliative means we possess in these cases. When the opening is not situated between the urethra and ureters, or in the neighbourhood of the latter tubes; when it is not of great magnitude, and when there is not much hernia of the bladder, you may attempt to remove the callous edges, and unite them by the assistance of sutures. You will be much facilitated in this opera-

tion by previously dilating the urethra sufficiently to admit the fore-finger of the left hand; by which you will be enabled to draw down the bladder and to afford a support and resistance in removing the edges. The instruments best adapted for this purpose, are very narrow double-edged scalpels, or lancets, with which you may pierce through the membranes and cut your way outwards. These should only cut a short distance from the extremity. It will be better to commence at the extreme edges of the opening, and not to attempt to effect too much at any one operation. By several operations you will gradually diminish the aperture, but by attempting too much you will be foiled altogether. To enable you to convey a suture through the edges, to hold them in contact, it will be necessary to employ *port-aiguilles*, with grooves which will hold a short triangular glover's needle at different angles, and with slides adapted for holding or letting loose the needle. The following is the mode in which I have employed this:—An armed needle should be fixed at the angle most convenient for piercing the denuded edges of the wound, which should be directed by the finger, and carried through the two edges. The point should be received by the other *port-aiguilles*, and the slide pushed up to fix it. The slide of the first should then be drawn down, which will leave the needle in the grasp of the second, by which it may be drawn through with its thread attached. To effect this in so narrow a space as the vagina is often most difficult, and requires much patience and dexterity. The ligature should be drawn tight, and the ends cut off. I have also employed short hare-lip pins, and the twisted suture; but these are still more difficult to pass, and cause much more irritation. In those cases which, from the situation of the opening, or its magnitude, no curative means can be attempted, a well-adapted truss, with an elastic gum pad, will often enable the patient to retain a considerable quantity of water, and to enjoy comparative comfort.

[Mr. Earle concluded his lecture by exhibiting the instruments he employed, and the sort of truss which he had found best adapted for these cases; one of which, he stated, he was about to have made for the patient now in the hospital, as he despaired of effecting

any more permanent cure, in consequence of the size of the opening and the great protrusion of the lining of the bladder.]

ADDRESS OF DR. BADHAM,

Professor of Medicine in the University of Glasgow;

On the Annual Distribution of Prizes for 1829.

NOTWITHSTANDING several severe impediments of a private nature, I could not suffer a second solemnity of this kind to pass without rising in my place, in order that the class which I have the honour to instruct might not be unrepresented on a great public occasion; in order, too, that individual merit might not be deprived of its public testimony, nor my intention farther postponed of saying a few words dictated by the interest I take in the students of medicine as a body, and in the rank I conceive them entitled to hold in a system of general education. That in this country, sir, meaning Britain at large, (for my remarks are by no means applied to Glasgow in particular) the whole course of public patronage and encouragement is applied to promote excellence in classical pursuits, is an undoubted, and, I think, an unfortunate fact; for though I am a friend most decidedly to all the pursuits of learning, and the inducements to excellence in them, I cannot but desire that they were not quite so *exclusive*—as if there were but *one* paramount object upon earth, the value of which, let it be what it may to the individual, is (I have the confidence to think and the courage to say it) so inconsiderable to the public, *compared with others*, that the *exclusive* countenance and protection afforded to it *does* appear sufficiently remarkable. For, estimate these studies, and their results, at the highest price, they are surely *still but subordinate*; not the column which *sustains the weight of the building*, but the capital only—not the shaft, but merely an embellishment which contributes its graceful yet not indispensable ornament, and which leaves the grandeur, the stability, the eternity, of the construction, to rest upon its proper foundation. As to medicine, it is my object to maintain that although she may often be disco-

vered in intimate relation with classical accomplishments, she has an *innate majesty* and a higher purpose, not indeed incompatible with, but completely *independent of them*; that the studies she peculiarly enjoins may challenge comparison in their *tendency* and *effects* with any that have usurped to themselves the over-fond and exclusive admiration of mankind. For if it *be difficult*, as I apprehend it is, to refuse a somewhat higher rank to science than to learning, it seems *impossible to do so* in those cases where great public purposes are contemplated and attained. Even the architect who asserted that he would suspend the Pantheon of Agrippa in the air, and effected that gigantic enterprise in the construction of the Cupola of St. Peter's, has left a far prouder evidence of his existence than the scholars of his day; and medicine is as far in excellence superior to *unapplied*, or *inapplicable literature*, as a purpose almost divine, accomplished by profound contemplation, and at the expense of personal ease, rises above the narrow objects of elegant and perhaps dangerous refinement, which, be it remembered, are selfish purposes at best. Her purpose and study have ever been the same; but when I add that the power of *executing* that purpose has in our times become as strikingly superior through the advancement of science, as the progress of a vessel impelled by its engine against the tide is superior to that of a barge on the towing path of a canal; or as the flight of a Congreve rocket is a more sublime instrument of dispersion and dismay, than the herd of oxen driven by night into the camp of the Roman Consul with torches tied to their horns, I suppose I may venture to claim for the student of medicine that he be at least equally welcomed, encouraged, and applauded, with the fabricator of faultless pentameters and immaculate iambics. And if, after all, injustice or pre-occupation shall deny him his just and well-earned place among his fellows, let him be consoled, and contentedly wear the not ignoble wreath which designated the man that had saved the life of a fellow-citizen—a full indemnity for that precarious and perfidious laurel of which the poisonous *emanation* seems at times to affect the brain under the brow which it adorns. Not that I am obliged to renounce for medicine the vanities of literature. I

have not forgotten that Greek letters were first introduced into Britain, and personally taught at Oxford by *Linacre*, the friend of Erasmus, the pupil of Chalcondylas, and the founder and president of our College in the reign of Henry VIII.; I have not forgotten, and I would not have the classical student forget, in his admiration of the phrenzy of Orestes or the sorrows of Electra, that he owes the first important editions of two of the Greek Tragedians to Dr. Musgrave; that his *Constantine*, the most copious and probably the best of the Greek Lexicographers, was a *physician*; that the learning and wit of Rabelais, the acuteness of Locke, the copious eloquence and various accomplishments of Haller, Gessner, and Zimmerman, were enlisted in the cause of medicine; that the Latinity and learning of Sydenham, Morton, Friend, Mead, Baker, Heberden, and Ash; the science of Woolaston, and the poetry of Garth, Goldsmith, Armstrong, and Akenside, are all our own, and have been connected in the most of these instances, with high professional eminence. If I claim, then, for medicine a separate, an independent, and a nobler existence, it is that I deem her temple *strong* enough to stand without the support of any buttress, and *beautiful* enough to dispense with the ornature of any parasitical vegetation.

Sir, I have said enough, perhaps more than enough, to shew that students of medicine are entitled to the consideration of studies directed to the highest purposes—if, indeed, the contemplation of those prospective contrivances, and harmonies of design in the structure of man and the material world, which inspired Paley with his eloquent theology, be allowed to be equal in importance to the study of the harmony and prosody of languages. But not to dwell on the course of painful and toilsome, yet liberalising and elevating studies which our profession exacts, nor on its ordinary exercise involving consequences far more hazardous to our own security and comfort than the studies themselves, I would ask the scholar (and in *no spirit of depreciation of pursuits which I admire—for my object is not to depreciate letters, but to assert the rank of medicine*) what sacrifices of inclination or repose he is required to make to mankind in return

for their blind admiration. Is HE called upon, at the slightest suggestion of duty, to tread the *tainted floor of the pest house*, or inspire the suspected atmosphere of the Lazaretto? Is HE enjoined to follow with his foot-steps, as he *cannot but follow* with his applause, the sublime devotion of those young and generous heroes who quitted, *without* the call of duty, the most fascinating capital in Europe, to explore, under a sky in which the vultures were hovering, the character of a new and ferocious epidemic, and to carry the succours of humanity to the beauty of Barcelona or the valour of Gibraltar?

I will scarcely condescend, sir, to appeal to personal or domestic considerations which so readily offer themselves, to my argument, or state what every one must know, that the possession of superior *comeliness*, as well as improved *strength* and augmented *security*, through whole communities—throughout society—are the unspeakable gifts of the art of medicine. I will scarcely desire my fellow-citizens to turn to their own homes, and amidst the ostentatious claims of classical attainments, pressed beyond their just value, by an admiration not always sincere, bid them remember *whence* they derived their consolation in affliction, in their own persons or the persons of those they love. How often, when the hot and chafed blood was dashed against its bulwarks, like the tide of some disturbed Æstuary, and the once calm and placid respiration had become an hurricane, has the *white star* of medicine (like the constellation of the Dioscuri to the ancient mariner) risen upon your dwelling, the harbinger of returning security, and the pacificatrix of the storm?

*Defuit saxis agitata humor
Concidunt verti, fugiuntque nubes
Et minax, quod sic voluere, ponto
Unda recumbit.*

LITHOTRITY—AN ENGLISH DISCOVERY.

By JOHN ELDERTON, Northampton,
Memb. Coll. Surgeons, London.

To the Editor of the London Medical Gazette.

SIR,

THE attention of the medical profession has been called, of late, to the perusal of some papers relating to the intro-

duction of lithotry; a process the writers appear to treat of as emanating from our professional brethren on the Continent. It is by no means my intention to enter into any elaborate discussion, but merely to demonstrate the priority of invention with the English, and to conclude with a few general remarks on the employment of the apparatus.

For many years I have occasionally submitted to some professional gentlemen in town various attempted improvements, both in surgical operations and instruments; and that I may not be thought to misrepresent, I beg to observe, I shall make no allusions but to what I can verify by letters in my possession.

The possibility of constructing an instrument to supersede occasionally the operation of lithotomy, was an idea that struck me when early initiated into the profession; and, to accomplish the project, an artizan of the name of Chapman (employed by the Governors of the Northampton Infirmary, where I was then an apprentice,) was employed to construct the model. This apparatus I now possess, and a moment's inspection bespeaks the following views in the contriver; namely, forceps to hold the stone, effected by the longitudinal division of the curved part of a sound or catheter, tempered to expand, and made to close through the medium of a stilette passing down the instrument. To pulverize the stone, when not susceptible of comminution through the pressure of the forceps, a second stilette is passed down the instrument, having a construction for the employment of either rasps or drills.

As my object is merely to substantiate the originality of the invention, I shall not enter into a detail of other properties this model would be found, on examination, to have aimed at attaining: but, to establish the truth of the above particulars, I refer the reader to the accompanying statement, made on oath by Mr. Samuel Humfrays, surgeon, wherein it will be seen the lithonriptor was planned during our contemporary apprenticeship, and prior to the summer of 1813, when I quitted the Infirmary to pursue my studies in town.

From the above-mentioned period of my visiting London, to the close of the year 1816, when I was engaged as a professional assistant to an emi-

ment surgeon, of the name of Hodson, of Lewes, nothing had been farther transacted in perfecting the lithontrip-tor, until the possibility of yet improving the instrument again attracted my attention, and gave origin to a series of diagrams, from which a person named Gurr, at Lewes, in May 1817, constructed the apparatus that afforded the epistolary correspondence referred to in the Letters Nos. 3, 4, and 7.

Having been appointed to the office of house-surgeon to the Northampton General Infirmary, soon after quitting Lewes, in June 1817, I engaged, late in the same year, a watch-maker named Whitmore, now living at Northampton, to perfect my views; and, accordingly, the instrument was made, an account of which I published in the *Edinburgh Medical and Surgical Journal* for April, 1819.

It might be here observed, that the instrument made by Gurr, of Lewes, was publicly exhibited when passing through London in the summer of 1817; as was that made by Whitmore, in the close of the same year, shewn to many eminent surgeons in town, for their opinion, in 1818. For the correctness of these statements I refer the reader to the perusal of the Letters and Extracts annexed; and as the individuals to whom references are made (with the exception of Mr. Roberts, late surgeon at Lewes) may be personally appealed to, the claim, as regards priority of invention, is *conclusive*, and when coupled with the public exhibition of the apparatus at St. George's Hospital, in London, in the summer of 1817, might possibly afford some clue to the singular coincidence of the instrument being said to have been invented in France shortly after.

The following are the references selected from many other letters, confirming the history of the invention, as advanced above; and should the profession express surprise that I did not put the instrument to the test of trial, I plead as a reason the influence of opinion broached in one or two of the letters following; not to add the tardy encouragement that resulted from some of those instruments that I had published, notwithstanding their efficacy had been proved and certified under the hand of our late experienced physician, Dr. Kerr. See the *Edinburgh Medical and Surgical Journal* for July 1820, for an example, detailing the construc-

tion of an instrument for reducing the dislocated shoulder, accompanied with an engraving.

[We have read the references alluded to in the course of this paper, and deem them perfectly satisfactory on the points to which they relate; but they are too long for insertion.—E. G.]

Trusting the perusal of the foregoing letters will satisfy your impartial readers, in respect to the lithontrip-tor originating with me, I shall close my paper with a few remarks on the apparatus, an account of which I published in 1819, and on the process of lithotritry in general.

Much stress is laid upon the advantage accruing from the discovery of the urethra admitting the introduction of straight sounds. Now, Sir, in this, as in some other statements, either an error or a wilful oversight occurs; for, if the apparatus I published be examined, it will be found perfectly straight, the curved part being confined to that portion which is to form the forceps; a shape which, unless I am essentially mistaken, even to a superficial mechanist must afford, when open, a far readier construction for grasping a stone, gravitating to the bottom of a concave cavity like the human bladder, than any diverging branches can do (however numerous) if projecting in a right line from the urethral canula.

Notwithstanding that some few years have elapsed since my attention was occupied in balancing the several advantages depending on diversified construction in the employment of the instrument, I well remember that the articulated extremity adopted in the construction of the forceps was preferred to the idea of grasping the stone by an approximation of pointed branches, which, instead of presenting one point, as in the articulated forceps, to the parietes of the bladder, would hazard three or four.

It is also demonstrable that the angular shaped opening assumed by the expansion adopted in the joint-pointed forceps, is well calculated, from the increased points of contact it affords in retaining the stone, to secure it against revolving, when its surface is under the action of the several spring rasps and drills specified in my publication.

That time and future discoveries in the improvement of the instrument, will establish lithotritry as a process su-

perseding lithotomy, I have never entertained a moment's doubt; and although unavoidable failures, and the accidents that will occur from the apparatus falling into the hands of individuals incompetent either to apply or appreciate its advantages, may, in the introductory æra of its employment, occasionally retard its success, future generations, from having timely recourse to its use, when the calculi are small, will practically learn to estimate the discovery.

I am, Sir,
Your obliged servant,
JOHN ELDERTON.

Northampton, Oct. 29, 1829.

CASE OF THE
CURE OF OPEN CANCER

By the Exhibition of the Chloride of Soda.

By THOMAS BUCHANAN, C.M.

To the Editor of the London Medical Gazette.

SIR,

I SHALL feel obliged by the insertion in your valuable Journal of the following history of a case of open cancer, cured by (what I presume to be) a new mode of treatment, after other modes had failed.

Jane Spencer, ætat. 53, of Burton-Pidsey, in Holderness, was under my care, about two years ago, for cancer of the right mamma. She had been several years affected with this dangerous and insidious disease, and had applied to various practitioners, in particular to the late Dr. Alderson, who advised extirpation as the only means of saving her life. When she applied to me the right breast was ulcerated to the extent of about two inches in diameter, including part of the nipple, and extending towards the axilla, with darting pains in the breast, thorax, and armpit. As the patient was determined against any operation, I applied the tincture of iodine over the whole of the breast, and dressed the wound with the ung. resin. comp. The ulcer healed gradually, but slowly; the pains diminished speedily; and in four days from the first application she was entirely freed from suffering. The parts, when healed, remained considerably indurated, but shewed no loss

of substance. This woman was one of those patients mentioned in my late work*.

In this state the breast continued nearly twelve months, when, in the beginning of June 1829, the whole of the indurated parts were thrown off, leaving a foul fetid ulcer of upwards of two inches and a half in diameter, which speedily discharged a quantity of thin, bloody, fetid sanies. All her former symptoms of darting pains in the breast, thorax, axilla, and abdomen, returned with redoubled violence.

The patient continued to have the ulcer dressed with such ointments as she could procure, until it became so nauseous, from the fetid smell of the discharge, as to affect, not only her own health, but that of her son, who dressed the wound. In this state she came to Hull, and applied to me, alleging, "that as she had found benefit formerly, she felt assured that I could do her good this time also." Having, prior to this period, frequently used a weak solution of the chloride of soda as a gargle in ulcerations of the mouth and throat, as well as in foul ulcers, I was induced, from these circumstances, to apply this powerful medicine in the case before me, and of the following strength:

R Liq. Chlor. Sodæ ʒvi.
Aqæ Distill. ʒviiij. M. ft. Lotio.

I dipped a pledget of lint into this lotion, and applied it to the diseased portion of the breast, with directions to keep the parts constantly moist with it; and also take two table-spoonsful of the solution three times a day.

The following day the discharge was changed to the colour and consistence of cream, totally divested of its fetid disagreeable smell. The ulcer healed rapidly; the whole of it was soon covered with healthy skin; forming, however, a considerable depression, occasioned by the loss of substance, as if part of the mamma had been dug out. The cure was completed by the latter part of June, 1829, being little more than ten or twelve days from the time of the first application of the solution of the chloride, and with only six bottles of the above, which were used indiscriminately as mixture and lotion. The patient was employed in the harvest

* Essay on the Treatment of Diseased Joints, and the Non-union of Fracture, &c.—Longman, Rees, and Co. 1828.

following, and as she expressed it, "wrought in better health and spirits than she had done for these last twenty years."

It may perhaps be asked, that as I lay claim to originality in the mode of treatment, why was this case not published prior to that of Mr. Fielding, of this place? To this I beg leave to reply, that I wished to ascertain whether or not the cure would be permanent; and also to collate a few similar cases before publication, and thereby, if possible, obviate any unfavourable impressions which your late critique on my work might create, where it was remarked—"Mr. Buchanan undoubtedly merits commendation for the zeal he has displayed in his trials of the medicine (iodine), however divided opinion may be on the results. For our parts, we believe the author has been led away by that leaning in its favour which all men must feel in pursuing a particular inquiry*."

Bearing in mind these circumstances, I therefore abstained from publication on this subject, and waited patiently the result of time, that great test of human discovery, in order to remove any shadow of doubt as to the permanency of the cure. But learning, through the medium of the Gazette (No. 92, p. 430) the very excellent cure of an open cancer made by Mr. Fielding, I then certainly thought it my duty to lay before you the history of the case.

Enclosed is a note received from my friend, Dr. Chalmers, one of the Physicians to the Hull Infirmary, after his examination of the patient, expressing his opinion of the cure. Your insertion of the history of this case in your valuable Journal, will much oblige, Sir,

Your constant reader,

THO. BUCHANAN.

Hull, Oct. 22, 1829.

FISSURED NIPPLES.

To the Editor of the London Medical Gazette.

Sloane-Street, Nov. 2, 1829.

SIR,

HAVING succeeded, à merveille, in curing fissured nipples, long an oppro-

brium of our art, by means of the Argenti nitras in substance, I cannot in my conscience refrain from making it known, through the medium of your pages, for the benefit of the sex, and the credit of Mr. Higginbottom.

I am, Sir,

Your obedient servant,

E. BOWDEN, Surgeon.

TIC DOULOUREUX.

To the Editor of the London Medical Gazette.

SIR,

HAVING lately met with a case of tic douloureux, which was effectually relieved by the use of carbonate of iron, I have ventured to transmit it to you for insertion, should you think it worthy a place in your valuable Journal.

A lady, aged 22 years, of sanguine temperament, had been subject to occasional attacks of tic douloureux, affecting the nerves of both cheeks; the paroxysms generally happening upon each recurrence of catarrh, to which she was very subject. During the first or second attacks of the former, the periods of exacerbation were but short, and the application of anodyne fomentations afforded decided relief; but within the last few weeks the disease had occurred more violently, and with shorter intervals. The excessive violence of the pain prevented her from enjoying sleep, except during an occasional hour when there was some remission of the pain. She had never experienced tooth-ache, and the teeth appeared perfectly sound. The anxiety, combined with the almost perpetual agony which she endured, reduced her from a state of robust health to that of nervous debility, attended with anorexia, &c. She had employed, by the suggestion of her medical attendant, stimulant and anodyne liniments and fomentations; aperients and quinine internally, &c.; and those domestic external remedies which had previously afforded signal relief, but now without producing any permanent, and scarcely even temporary relief; when, at my request, she was induced to try the effects of the carbonate of iron. She began with one scruple, four times a-day, in treacle, with directions to add five grains daily, till she took two scruples

* Medico-Chirurgical Journal, Dec. 1828.

for a dose. This, from the size of the powder, or from its being unpleasant to her, produced slight nausea, but was persisted in for a week, at which time the pain was very considerably abated. At the expiration of the second week the nausea ceased; the pain had entirely left her; her appetite returned, and I directed her to adhere to a milk diet. At the termination of the month from the first dose, she had recovered her strength greatly, and had regained the ruddy colour of the cheeks, which for a few months had left her. She continued the use of the carbonate of iron, but decreasing gradually the quantity till she took four grains for a dose; she then desisted altogether, and has not had a relapse since. By inserting this you will oblige,

Your constant reader,
T. R. COOPER.

Guy's Hospital, Nov. 2d, 1829.

ASSURANCE COMPANIES.

To the Editor of the London Medical Gazette.

SIR,

It is not at all an unusual thing to hear medical practitioners speak with much asperity of the various Life Assurance Societies, and always upon two grounds of complaint:—first, on account of the unhandsome manner in which it is alleged these societies sometimes request, or require, information respecting the health of persons desirous of being assured; secondly, because the letter of application is not accompanied with a fee, which, it is contended, ought always to be given for a professional opinion.

It is far from my intention to offer a defence of those who omit to make their applications for the necessary information in the most polite and courteous manner. The wording of their letters may, perhaps, in many instances, be calculated to stir up angry feelings in a sensitive mind; and if so, it would be prudent in the offices to amend any expressions that may be likely to give offence. One office, indeed, (I hope but one,) is guilty, on these occasions, of a greater insult than men of probity and honour can easily bear; for it scruples not to hold out a threat to those whose statement is

wanted, that *the answer will be filed**: thereby insinuating that the physician, or surgeon, to whom they apply, would, if not deterred by the threat of having his letter filed, be base enough to certify falsely respecting his patient's health.

If to such an application as this an answer be at all deigned, it ought, I grant, to be paid for by a fee, for no board of directors has a right to threaten with their vengeance those to whom they apply, unless they have given the *quid pro quo*—an adequate gratuity.

But under the ordinary circumstances of an application of this kind, ought a fee to be expected?

It is a *sine qua non* with all the assurance companies, that the person seeking to be assured shall refer to some respectable householders to speak of his moral character, his mode of living, and the general state of his health. As a preliminary step, he is required to sign a proposal-paper, setting forth his name, age, abode, occupation, state of health, &c.; and in this proposal-paper he is further required to insert the names of two or more persons of good reputation (one a medical man), who can give an attestation to the effect above-mentioned; and till such proposal papers are duly signed, and till such testimonials are before the directors, no application can be attended to, or policy be granted. This is a vital regulation in all Life Assurance Societies, from which there is no deviation.

References of this kind are, of course, made only to friends, and it is naturally supposed that the gentleman who is the regular medical attendant upon the person to be assured, or his family, is sufficiently a friend to furnish the necessary testimonial without a fee. With just as much reason as the medical man claims a fee for his testimony, might the other persons referred to claim a remuneration for theirs: but such a claim was never heard of; nor could the business of Life Assurance be easily carried on, if such a claim were enforced.

The question is often asked, "would any lawyer reply to such a letter without being paid for it?" Yes: lawyers sign such testimonials without a fee; the clergy do it without a fee; soldiers, sailors, magistrates, country gentlemen, bankers, merchants, tradesmen, clerks in public offices, all classes of society, agree in forwarding this necessary

* This is done by the Rock.—E. G.

document, without putting their friend who requests it to any expense. Some of the medical profession, probably from not having duly considered the subject, for they are rarely behind the rest of the world in liberality, are offended if they are not paid for this piece of civility.

Suppose the fee given; from whom is it to come?—from the party to be assured? What! will a medical man of reputation take a fee for certifying that the patient, whom he has known for years, is in good health?—or, suppose his health not to be good, will he take a guinea from his patient, and immediately report to the assurance office that his life is hazardous? Can he put the fee into his pocket with one hand, and with the other sign an unfavourable report?

But it may be replied, the office ought to give the fee*. Will this mend the matter? Will it not rather tend to create a jealousy on the part of the patient against his medical attendant? Particularly if he should be rejected by the office, is he not likely to conceive that the fee has tended to produce a more unfavourable report than would otherwise have been given?—that the doctor has, in fact, been bribed to set a mark upon his patient?

On the whole, I cannot do otherwise than believe it desirable that no fee should pass upon these occasions, and that the medical attendant upon a family will be satisfied that he can more conscientiously give an opinion, if, from neither party, he derives any pecuniary emolument.

F. R.†

October 28, 1829.

* It would not be possible for any assurance office to exist long if this were to be generally done; and if not generally, how is it to be done at all? Every assurance office has numerous applications made to it, on the behalf of parties who either do not mean to effect assurances at all or alter their minds afterwards; or wander from office to office, to discover at which they can get the assurance effected upon the most favourable terms. Taking all the offices conjointly, these non-effective applications must amount to some hundreds every year. If the offices were to fee the medical attendants upon families, for the information they seek after, it must be conditionally—that the assurance is effected; and the physician, or surgeon, would have to be looking out, week after week, to ascertain whether his patient was assured or not. Paltry!

† There is no signature in the original, but we think it better to attach one, in case of the paper being referred to by any other correspondent—E. G.

SUUM CUIQUE.

To the Editor of the London Medical Gazette.

SIR,

It is too much the fashion among us, when complacently descanting on our correct views and improved modes of investigation, to allude to the older medical authors with a degree of contempt which I fear leads us to an undue neglect of their writings, and leaves us in ignorance of many valuable facts and observations which, if properly prosecuted, would conduce to the attainment of that perfection in our art which it is yet far from possessing. There is now such a crowd of labourers in the field that we forget the fathers who first broke the ground, and the successive cultivators, who deserve our gratitude for so many obstacles encountered and overcome.

A little more attention than is usually devoted to the labours of our predecessors would also, in no small degree, tend to diminish an evil loudly complained of—viz. the multitude of authors who, from an ignorance of what has been done before them, impose upon you the task of reading and reviewing the “results of observations” made and recorded before they were born; and not a few among us, whose characters ought to protect them from any suspicion of literary dishonesty, would escape the charge of plagiarism in which an acquaintance with past medical literature now and then involves them.

But, from the disrepute into which our ancestors have fallen, and the necessity supposed to exist of keeping up our stock of knowledge by every man bringing his contribution monthly and annually into the market, our very contemporaries are likely to be numbered with the forgotten dead, and a work which is ten years old becomes obsolete as a matter of course. An amusing illustration of such a consequence is given by yourself in a late number, where Dr. Gooch is rated soundly by a critic for pilfering from a neighbour what, on a little investigation, turned out to have been, for many years, his own *bonâ fide* property. In your last number, likewise, two instances occur in which originality is assumed, where, but

for want of acquaintance with what was done before, candour, I am sure, would have prevented any such assumption. Mr. Lawrence, in detailing the distinguishing characters of inflammation, observes, that the view exhibited from the appearances it presents in an external part, has been generalised, and made a kind of representation of what occurs in inflammation in the body at large. "Hence," he continues, "inflammation of all parts has been said to consist in the combination of the four circumstances I have already detailed, viz. redness, swelling, heat, and pain: But I think, in order to make the enumeration of its characters complete, there should be two other characters added to these: we should take into view that important result—the interstitial deposition into the substance of the part, and we should also include in our view an event which is equally important—the impaired or suspended function of the organ affected." Now to learn whether or not it was left for Mr. L. to complete, by this addition, the characteristics of inflammation, let us turn to old Cullen's definition of phlegmasia. "*Febris synocha; phlogosis (partis externæ, rubor, calor, et tensio dolens); vel dolor topicus, simul, læsa partis internæ functione;*) sanguis missus et jam concretus superficiem corraceo albam ostendens." In this short definition, then, the best perhaps in nosology, the characters necessary, according to Mr. Lawrence, to constitute inflammation, were comprehended half a century ago.

Mr. Jewell, in directing attention to what appears a very rational piece of practice, favours us with his opinion of the most frequent cause of vaginal discharges, as being *the result of a strict investigation* into the numerous causes of leucoidal complaints which have fallen under his observation. This cause is no other than the sub-acute or chronic inflammation of the cervix uteri, about which so much has been written, with the view of instituting a rational practice in female discharges, by those ancient worthies, Mr. John Burns and Dr. Charles Clarke.

I have the honour to be, sir,
Your humble servitor,
JONATHAN OLDBUCK.

Monkbarns, Nov. 1, A. D. 1829.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tne à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Principles of Military Surgery; comprising Observations on the Arrangement, Police, and Practice of Hospitals; and on the History, Treatment, and Anomalies of Variola and Syphilis. Illustrated with Cases and Dissections. By JOHN HENNEN, M.D. Inspector of Military Hospitals. Third Edition, with a Life of the Author. By his Son, Dr. JOHN HENNEN. 8vo. pp. 583.

WITHIN the last half century every science has made rapid progress; and, happily for humanity, none has improved in a more conspicuous manner than military surgery. It is not very long, as our author has remarked, since one of the most enthusiastic medical philosophers observed, that "practice, not precept, seemed to be the guide of all those who studied in this branch; and if we observe the practice hitherto pursued, we shall find it very confined, being hardly reduced to the common rules of surgery, and therefore it was hardly necessary for a man to be a surgeon to practise in the army."

A great change has taken place since the period here alluded to, and we are chiefly indebted for it to such works as the one before us; which carries proof with it, that though military surgery was then little better than a rude craft, it is now reduced to a science, based on ample experience and philosophic reasoning. At that time obscurity and neglect were the portion of its followers; honour and fame are now the rewards of well-directed talent; and to be convinced that they have not been held out in vain, we have only to recollect the names of some of our contemporaries; of Larrey and Percy; Hennen and Guthrie; and many others, whose valuable labours have so materially improved, not only military surgery, but the whole science.

Prefixed to this edition we have a life of the author, by his son, in which a very interesting sketch of his career is given.

"The lamented author of the 'Principles of Military Surgery' was born on the 21st of April, 1779, at

Castlebar, County Mayo, Ireland; and after a career of nearly thirty-one years, spent in active employment, and entirely devoted to the public service, died at Gibraltar, of the yellow fever, on the 3d of November, 1828, aged forty-nine years and six months."

He commenced his professional studies under his father, who was a medical practitioner, and attended the county infirmary. At the conclusion of his time he went to Edinburgh, and studied under Monro, Cullen, and Black. In March 1798 he received his diploma from the College of Edinburgh; and in 1800 he was appointed assistant-surgeon to the 40th foot. In 1809 he was ordered to Spain, where his zeal and attainments soon attracted the attention of the head of the medical department, Sir James M'Grigor, who has always shewn himself the patron of merit, and by whom he was subsequently placed in charge of some of the most important surgical hospitals in the Peninsula.

In the peace, in 1814, he retired to Scotland, for some time, on half-pay, and entered into private practice at Dumfries. During this short respite from active employment, he began to arrange the materials which he had collected whilst engaged in his arduous duties with the troops in the Peninsula, and planned his work on "Military Surgery."

In 1815 he was again called into active service; and after the battle of Waterloo he had the sole superintendence of the wounded general staff. He was afterwards removed to Edinburgh, where he published the first and second edition of this work, and for which he received from the Emperor of Russia a magnificent diamond ring, "as a mark of his high approbation of Dr. Hennen's work on Military Surgery."

In the beginning of 1826 he was placed in charge of the medical department of Gibraltar. In August 1828 a fever made its appearance, and soon assumed the character of former epidemics. Dr. Hennen's exertions were unremitting, night and day. On the 28th of October he was himself attacked. He still, however, continued in the performance of his duties, and up to a few hours of his death he continued to dictate letters, and sign the official papers, &c.

A subscription was immediately entered into by all classes in Gibraltar, as well as in London, Dublin, and Edinburgh, for the purpose of erecting a monument to his memory, on which an inscription has been engraved, testifying his high worth.

The alterations which this work has undergone for a third edition are not very important. The plates, which added to the expense of the second, have been omitted, we think, with advantage. There are a few additional observations, and many references to other works: it altogether bears the marks of a very careful revisal.

At the conclusion of the introductory remarks, Dr. Hennen observes—

"At the termination of a series of wars, which for a large portion of a century have desolated the fairest regions of the European world, and drenched their fields in blood, the medical philanthropist will naturally ask, what results have accrued from such ample sources of experience? what progress has been made in softening the miseries of pain and disease, and in extracting from such multitudes of victims, antidotes to the waste of human life? The younger practitioner, also, who may enter the service of his country, will inquire where am I to collect the fruit of that experience, with which so many campaigns have enriched my predecessors? and how, if the opportunities come within my reach, am I best to avail myself of them? It is in some degree to answer these interrogatories that I have ventured to make the following observations."

The value of Dr. Hennen's work is too well appreciated to need any praise of ours. He has here beautifully explained the object he had in view in writing it; and the high estimation in which it is held, proves how well he acquitted himself of his task. We were only required, then, to bring the third edition before the notice of our readers; and having done this, we shall merely add that the volume merits a place in every library, and that no military surgeon ought to be without it.

ANALYSES OF BRITISH MEDICAL JOURNALS.

EDINBURGH MEDICAL AND SURGICAL JOURNAL.

October 1829.

Quarterly Report of the Edinburgh Surgical Hospital from May to August 1829. By JAMES SYME, Esq. Fellow of the Royal College of Surgeons, and Lecturer on Surgery.

CIRCUMSTANCES, which it is unnecessary for us to enter upon, induced Mr. Syme, of Edinburgh, to institute a "surgical hospital" for twenty patients, and the present paper contains an account of the most interesting cases which occurred during the first three months of its existence—viz. from May to August 1829. Some of these will be given in our general collection of hospital reports. It may be proper here to mention that the case of excision of the upper jaw, detailed in the Gazette, vol. iv. page 215, did well, the patient being entirely relieved from his complaint, and having no inconvenience left except a small gap in the cheek.

Case of a Tumor of the Radial or Spiral Nerve of the right Arm, removed by HARRY LEEKE GIBBS, M.D. Member of the Royal College of Surgeons of London.

This case was first published in the Gazette, vol. iv. page 269, to which we refer.

Observations on the Ophthalmia Neonatorum, or purulent Ophthalmia of Infants. By J. H. WISHART, Esq. F.R.S.E. Surgeon to the King in Scotland.

After describing the phenomena usually presented by ophthalmia in young children, Mr. Wishart, in alluding to the causes, observes, that more than two-thirds of the infants affected with this disease are born of mothers labouring under a mild form of leucorrhœa; and although he remarks that it is difficult to determine whether the occurrences are necessarily or accidentally connected, it is obvious that he inclines to the former opinion. He adds, that the disease always has a certain duration,

never yielding in less than four weeks, and often extending to ten or twelve, but that it only assumes a great degree of intensity where the children are exposed to cold damp air, or are ill fed, and badly treated. Of such papers the practical points are of most value, and to these we now direct attention.

"The mode of cure which I have uniformly found successful, is the following:—

"If the patient comes under my care in one or two weeks from its commencement, I immediately wash away the puriform matter which glues down the eyelids, with a little warm water; and then, with a small conical-pointed ivory syringe, I inject the following eye-water:—

R Sulphatis Zinci scrupulum, Aquæ fontis uncias decem; Solve, et adde Liquoris subacetatis plumbi semidrachmam et Tincturæ Camphoræ drachmam vel drachmas duas. Misce et cola,—

At first diluted with a little warm water, to bring it to a proper temperature, as it always answers best at first to use it tepid, especially in very cold weather. This is repeated three times a day in ordinary cases, or every hour or two if the quantity of the discharge is very great, and is rapidly collected. In young infants the strength must be determined by the length of time they cry after the use of the collyrium. If the child continues to cry bitterly more than ten minutes, I consider it necessary to dilute the solution; but although they cry violently during the time of the application of the remedy, I have generally observed that they are more easily pacified the more frequently it is used. The degree of pain is also expressed by the contraction of the eyebrows and upper eyelid. The attendants are directed to prevent as much as possible the subsequent accumulation of the discharge, by washing it away as soon as it is observed with a little of the above-mentioned eye-water, and at night a little of the ointment of the oxide of zinc is insinuated between the eyelids; and in general, although they cry very much during the washing, the ointment does not seem to give them any pain. In some cases, I have seen considerable benefit from the application of a single leech to the outer angle of the eye, especially when we suspect that the inflammation is extending to the eyeball.

" In a few days the swelling and redness of the eyelids diminish, and then the ointment may be applied after using the eye-water. If, on attempting to open the eye, the lids seem very turgid, or if a little blood is forced out by the pressure, the lids should be freely scarified, and the bleeding encouraged by fomenting with warm milk and water. If at this time, as frequently happens, the upper eyelid is everted, the scarification is the more easily performed; but care should be taken to replace the eyelid as soon as it is done. This is readily effected by gently pressing the edge of the tarsus with the finger, when the child ceases crying.

" In the course of two weeks, if the cure goes on well, the swelling of the eyelid subsides, and the discharge acquires a watery appearance, as if mixed with the tears; the infant opens its eyes for a short time in the evening, and they are only glued down in the morning. At this period I usually change the collyrium to a weak solution of the muriate of mercury*, with the addition of the vinous tincture of opium; the red oxide of mercury ointment may be substituted for the zinc ointment; and it may be applied three times a-day, if the eyelids have still a tendency to adhere. At the end of a month it is generally unnecessary to continue the use of the syringe; but the eye should be carefully washed, by dropping a little of the collyrium into the hollow at the inner angle of the eye, and by gently separating the lids, it passes readily over the surface of the eye and lids.

" As it sometimes happens that the patient cannot be seen so often by the surgeon as the urgency of the case may require, and as the use of the syringe requires more skill and attention than the common attendants of children are capable of bestowing, I have found it necessary to direct the eye-water to be applied in the following manner:—A piece of soft sponge is to be dipped in the collyrium after it has been properly warmed; with this the edges of the tarsus are to be gently bathed, until all the hardened mucus is washed away, and the eyelashes separated from each other; the upper eyelid is then to be carefully raised, that the matter collected under it may be allowed to flow out. When the eyelid is thus elevated, the

soft sponge is to be squeezed at the inner angle of the eye, that the fluid may pass over the conjunctiva and eyeball. Besides this, considerable benefit will be derived from fomenting the eyelids two or three times a-day, and also during the night with the same collyrium*. The fomenting should be continued for nearly ten minutes each time; but the mother or nurse must be cautioned not to allow the cloths to become cold, and after fomenting the eyelids and surrounding parts, they should be carefully dried with a warm cloth; and during severe cold weather, compresses of two or three folds of soft linen should be applied over the eyebrows and cheeks, to guard them from the cold."

In preventing the accession of the disease, Mr. Wishart lays some stress on curing the leucorrhœa of the mother previously to her delivery, and afterwards suggests the administration to the parent of cubebs—that is, if she suckles the child. Of this last plan, all that the author says, is, that he is satisfied it is safe, but has not made up his mind as to its being actually beneficial.

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Observations on the variety of Dropsy which depends on Diseased Kidney.
By ROBERT CHRISTISON, M.D. &c.

This paper is of considerable interest: it consists of some well detailed cases of dropsy, the general results of which fully confirm the views of Dr. Bright, as published in his valuable "Reports of medical cases." The dependence of dropsy on organic disease of the kidney is a very important pathological consideration, and that such is more frequently the case than we have hitherto suspected seems the necessary consequence of a statement, made by Dr. Christison, that there have been about twenty cases of this nature treated at the infirmary of Edinburgh during a twelve-month. It will be remembered that, according to Dr. Bright, (see Gazette, vol. i. pp. 88 and 122) the disease of the kidney, when fully developed, exhibits the appearance of a yellowish granular formation in its substance; and that this is always found after death where there has been albuminous urine during life, the urine containing but a small proportion of salts, and less urea than

* R. Mur. Hydrarg. gr. i. Aq. Rosæ ʒvi. solve et adde vin. opii ʒiiss. M. ft. collyrium.

* The application of warm poultices is always attended with the most deleterious consequences.

usual. The disease being indicated by pain across the loins or belly; by derangement of the stomach; and by purple urine, as if it were mixed with blood—or this actually being the case. This condition he farther states to be accompanied by a tendency to internal inflammation, and that bleeding is frequently the most efficacious remedy.

In the form of dropsy alluded to by Dr. Bright, in his reports, and Dr. Christison, in the paper before us, a diminution in the quantity of urea contained in the urine is a striking character; and this probably led to the idea that it might accumulate in the blood, as was found by MM. Prevost and Dumas to take place in dogs, when they extirpated the kidneys; an experiment, by the way, which carried with it the necessary inference that urea is not formed in the kidney, but merely eliminated by that organ from the blood, in which it had previously existed. One of the most important parts of Dr. Christison's cases relates to this point, for he proves more clearly than Dr. Bright had done the occasional existence of urea in the blood of patients labouring under this form of dropsy—as will appear from the following interesting case, which also illustrates the mode of conducting the analysis:—

“ Francis Magee, aged 57, a weaver, at the time of his admission into the infirmary on the 5th August, 1828, had been affected for three weeks with considerable œdema, and some swelling and firmness of the belly. He had also occasional vomiting in the morning, and dull pain on pressure in the pit of the stomach and along the margin of the ribs on the right side. He had likewise frequent cough, with difficult expectoration of tough opaque mucus, and considerable difficulty of breathing. The chest sounded every where loudly on percussion; and both acts of respiration, but particularly expiration, were prolonged, inspiration being also indistinct, expiration distinct, sonorous, and sibilant. The pulsation of the heart could not be felt with the hand when he lay on the left side; and with the stethoscope both sound and impulse were feeble. The pulse too was feeble, and only 52 in the minute. The tongue was furred and breath fetid; the bowels required the frequent use of laxatives; the urine was of natural quantity, but exceedingly pale, being of

the lightest possible straw colour, and depositing a moderate quantity of white flakes when heated.

His pectoral complaints were of eight years standing, and began subsequently to the healing of an old ulcer on the leg, which had been occasionally healed, though only for a few weeks at a time, during twelve years previous to its final cicatrization. About a year before his admission into the hospital his breathing got worse, so as to annoy him when at work. About that time he had also a comatose attack, which lasted a day, and was removed by blood-letting. After that his urine had been always pale but natural in quantity. For two months before he entered the hospital he had pain in the loins, difficulty in passing urine, and frequent attacks of vomiting.

“ He was ordered ten drops of tincture of digitalis thrice a-day in an ounce of infusion of cassia, and likewise a mercurial pill every evening. Laxatives were also given from time to time. On the third day of this treatment the urine was 104 ounces, and had a specific gravity of 1007.9. The œdema was lessened; and the action of the heart both to the hand and to the stethoscope was natural, though rather feeble. On the 11th August the œdema was gone, the ascites nearly so; but his breathing was as laborious as ever, and he complained of pain round the whole lower margin of the chest, particularly in the loins, where pressure made the pain shoot towards the stomach. The digitalis was discontinued, and a squill mixture ordered in its place.

“ From this time the urine began to decrease in quantity, till on the 16th it was only 40 ounces daily. Its specific gravity was 1008.4, it was as colourless as ever, coagulated more abundantly when heated, and contained very little urea. There was no return of the dropsical swellings, but his difficulty of breathing and cough were not in the least relieved. Next day the breathing was worse. He also became affected with headache, drowsiness, contracted pupil, some livor of the face and tremors of the hands. The pulse was 60 and full, and the tongue brown on the centre. Fourteen ounces of blood were therefore taken from the arm, with some relief to the dyspnoea; and the blood was very buffy in one cup. The squill was now abandoned and the digitalis

resumed. On the 18th the symptoms connected with the affection of the head were rather increased, and he was feeble and much exhausted. The urine was only fifteen ounces. A brisk laxative and a purgative enema were ordered, leeches were applied to the temples, and subsequently a blister to the head; but without any advantage. His stupor and tremors got gradually worse and worse; he complained of tenderness over the whole belly; the urine on the 19th was only twelve ounces; on the 20th twelve ounces were withdrawn by the catheter. On the morning of the 21st he died.

The whole urine passed during the last thirty-six hours of his life was two ounces. This had precisely the same external qualities as the urine previously passed, but had rather a higher specific gravity, namely 1009.5.

Inspection.—There was very little œdema of the limbs. The face was not livid, and the scalp was free of blood. The sinuses of the dura mater contained only a moderate quantity of blood; the arachnoid and pia mater, as well as the substance of the whole brain, were remarkably destitute of blood, and blanched. There was not above half a drachm of fluid in each lateral ventricle, and half an ounce in the base of the skull. Even in the base of the brain the vessels were unusually empty of blood. The cortical matter of the brain appeared less in thickness than natural. In the middle of the left *thalamus*, half an inch behind the anterior commissure, there was a cavity which would have held a cherry-stone; it was crossed by filaments of cellular tissue, walled in by a thin partition of condensed cerebral substance, but not surrounded by redness or softening.

“The pericardium and base of the left lung adhered to the pleura of the ribs by very old adhesions; and four ounces of clear serum were contained in the pleural sac of that side, but none in the pericardium. The posterior part of the lower lobe was very œdematous. The walls of the left ventricle of the heart were somewhat thickened, and its cavity contracted. The aorta was slightly and uniformly enlarged at the arch, and its whole inner membrane thickened, hard, and wrinkled,—the valves being also involved in this change of structure. On the surface of the right lung there were many old adhesions to the ribs; and in its substance a

great deal of œdematous infiltration. The fore part of both lungs was gray, strongly crepitant when handled, and slightly emphysematous,—the whole air-cells being somewhat enlarged. The nature of their structure in the posterior part could not be ascertained, on account of their state of infiltration. The greater bronchial tubes were filled with mucus. The blood was every where black and fluid.

“The stomach and intestines were healthy. The spleen was pale reddish-brown, firm, and composed of little radiated masses, (not unlike the mineral Wavellite in appearance.) The liver was somewhat larger than usual, but in structure perfectly healthy. The kidneys were both much diseased: the right was rather less than natural, externally rough with small irregular nodules and of a pale grayish-brown colour, internally of a pale grayish-yellow tint. The *tubuli uriniferi* were much nearer the surface than in the healthy kidney, greatly diminished in size, and pushed as it were outwardly by a deposit around the *pelvis* of grayish-yellow, indistinctly granular matter, into which also the whole cortical substance was converted, so as to have lost its usual fibrous appearance. Even the fibres of the *tubuli* were unusually pale, and the yellow matter was deposited among them. The *pelvis* of the kidney was small, the ureter pervious. The left kidney was very diminished in size, flattened and flabby. Its cortical substance was in the same state as that of the right kidney, but rather darker, and with a few distinct tubercles; and some grains were softened. The tubular portion was of a dark brownish-red colour, and not fibrous at all; and it contained several small watery cells, apparently the remains of the infundibula. The ureter was pervious. The capsular fat of both kidneys was indurated, and the tunica propria thickened and adhering.

“*Analysis of the Blood.*—About an ounce of blood was collected from the vena cava by an incision in the loins, great care being taken to keep it clean and pure. It was black, fluid, and nearly free of the odour of putrefaction. It was heated in a vapour-bath at a temperature a little under 212, and rapidly stirred as soon as it began to coagulate. A thick, brownish-red, granular mass being thus formed, a little distilled water was added; and after agitation,

the whole was filtered. A cherry-red fluid passed through, which at 212° deposited more brown flakes, and became wine-yellow in colour. This was evaporated nearly to dryness in the vapour-bath, at a temperature beneath 212° , during which a fetid odour was exhaled, exactly the same as that of the patient's breath during life. Just before the fluid began to acquire a syrupy consistence, a drop of it was treated with nitric acid, which rendered it opaque, and caused considerable coagulation; but crystals were not formed. The syrupy extract, when acted on by boiling alcohol, gave a pale wine-yellow solution, which was evaporated in a small glass vessel till it began to thicken. This extract had the same fœtor.

"On the addition of a few drops of nitric acid, the same odour was exhaled from it as from extract of urine, when similarly treated; and immediately fine, greyish-red, flaky crystals, of a pearly lustre, were formed in abundance, so as to thicken the whole mass. These were evidently scales of nitrate of urea."

Another inference of a consolatory nature, deducible from some of Dr. Christison's cases, would seem to be, that the organic change of the kidney may be arrested if discovered in its early stage—that is, some patients presenting the symptoms of it have been ascertained to have remained free from dropsy for several years after they had undergone proper treatment. The observations of both the able physicians alluded to agree essentially as to the power of various diuretics. Digitalis frequently acted well; but supertartrate of potass was, upon the whole, the most certain. Mercury has not, in the hands of Dr. Christison, produced, even when salivation resulted, those injurious consequences which Dr. Bright seems to apprehend.

Remarks on Amaurosis, with Cases.

By Dr. J. A. ROBERTSON, F.R.S.E.
Surgeon to the Eye Dispensary of Edinburgh, &c.

The term amaurosis, Dr. Robertson observes, is generally applied to all those cases in which vision is impaired or lost, in consequence of disease of the retina or optic nerve; it is usually accompanied with dilatation of the pupil, which remains immoveable; but the author of the present paper has more

than once seen it dilated and fixed, without vision being much affected. In one case this appeared to have arisen from an attack of iritis, during which the pupil was kept dilated by means of belladonna, and seemed to have contracted adhesions when in this state. Again, in some cases of amaurosis, the iris acts as in the healthy eye. Dr. Robertson thinks the disease more decidedly hereditary than cataract. The principal object of the paper, however, is to shew that pressure on the nerves of the eye, by the fulness of the blood-vessels in their immediate neighbourhood, is a very frequent cause of amaurosis, and, consequently, that depletion is often the most efficient remedy. For this purpose several cases are detailed, in which bleeding was of great service. These, however, were all recent cases, attended with symptoms of congestion, and in such only does the author profess to have found blood-letting decidedly beneficial.

While we admit the propriety of the remedy, we must observe, that the cases adduced appear to us rather to belong to those of apoplexy and its premonitory symptoms, than to what we usually understand by amaurosis. A continuation of the paper is promised.

On the Sounds produced by the Action of the Heart. By DAVID WILLIAMS, M.D., Physician to the North Dispensary, Liverpool.

Mr. Turner published a paper in the third volume of the Transac. Med. Chir. Society of Edinburgh, in which he argued against the explanation offered by M. Laennec of the sounds produced by the action of the heart. On applying the stethoscope we hear—first a dull and prolonged sound, and this is followed by a sharp quick sound; after which comes a momentary repose. The first of these sounds was attributed by the French pathologist to the contraction of the ventricles; the second to that of the auricles. This idea makes the contraction of the ventricles precede that of the auricles, an order the reverse of that which is generally admitted, and on this contradiction the objection of Mr. Turner chiefly hinges. Dr. Williams agrees with Mr. Turner in so far as regards the rejection of Laennec's explanation; but he does not think that the suggestion offered by

Mr. Turner admissible. All the practical deduction we have been able to draw from the paper is, that those who have paid most attention to mediate auscultation differ considerably in their opinions; and that some of the signs they have pointed out of disease of the heart are either fallacious, or require a sense of hearing of more than ordinary delicacy to detect them.

MEDICAL GAZETTE.

Saturday, Nov. 14, 1829.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

LATIN EXAMINATIONS.

ONE of the barbarous customs which still survive in our great establishments for medical education, is that of examining candidates for degrees and licenses in the Latin language. It is curious that this abuse, handed down to us from the "good old times," has been so completely overlooked by contemporary writers. In this reforming age, one would suppose that so palpable a source of imperfection in our educational machinery could scarcely escape the censure which it deserves. With the inattention, however, but too frequently observable in our speculators on a great scale, the matter in question has been neglected as unimportant—perhaps as one that would fall betimes a victim to its own absurdity. It is to be hoped it may. But when we see the statutes and ordinances upon which the custom is founded adhered to with a pertinacity which promises it a lengthened existence, it is full time to call public attention to the subject. There is no knowing how much good may arise from the exposure of absurdity

and error, however trifling at first sight they may appear.

From the revival of literature in Europe, it is well known that for several centuries the Latin was the universal language—the great medium of instruction in every branch of human knowledge. Every treatise in law, physic, and divinity, was written, or at least published, in the Latin tongue; every Professor addressed his auditory in the same language. The first attempt ever made to shake off the pedantic yoke was by that extraordinary man Theophrastus Paracelsus, in his professorship at Basle, in the early part of the sixteenth century; but it proved a dangerous experiment. It was deemed as daring an innovation, or heresy rather, as that of his great cotemporary, who was at that very period reforming the language as well as the doctrines of the church; and to have presumed to break through the academic fashion by lecturing "in the vernacular," has ever since been recorded against Paracelsus as not the lightest of the high crimes and misdemeanors imputed to his charge. It is scarcely necessary to add, that his attempt did not succeed; the old system was resumed by his successors, and to this day the Latin is the prevailing language of the lecture-rooms throughout Germany.

The French very early manifested that decided partiality for their native tongue, for which they have ever been so remarkable; and they may boast of having been the first nation in Europe which asserted their own dignity, by abolishing the then degenerate Roman idiom as a medium of communication between the learned.

But in England, strange to say, notwithstanding the early reception which the Reformation obtained amongst us, the Latin language—"the language of Antichrist" (as some of the Scottish covenanters used to call it)—prevailed in

all our Universities until about the middle of the last century. It was about that period, or somewhat later, that the eminent political economist and moral philosopher, Adam Smith, broke the spell. The innovation escaped the censure of "the learned," and was gradually adopted in the schools; and at present, we believe, it would be as difficult to find a lecturer in any of our seats of learning speaking Latin *ex cathedra*, as it was formerly to hear one of those individuals condescending to speak in his mother tongue. Addresses in Latin are fortunately no longer heard in our Colleges, except, perhaps, an occasional sermon for a degree, or an oration in honour of a founder or a festival. How much were it to be wished that this reform had gone a step farther! but here it stopped, leaving the absurd custom of which we complain unreformed.

At a time when the Latin, as a spoken language, has become perfectly obsolete, and when science has become intricate and extensive, we find the Universities still adhering to the old leaven—still pretending to ascertain the merit of candidates for honours (at least for medical honours) through the medium of Latin examinations. And our learned Colleges of Physicians, too, follow their example.

Now, when the object is to ascertain the extent of knowledge acquired by the candidate, it would seem natural that the most familiar mode of expression should be allowed him by his judges, and adopted by themselves; and surely no one will venture to assert that a foreign, nay more, a dead language, can be spoken with the same freedom and fluency as one's native tongue. Why, then, persevere in its employment? Is it for ostentation sake—to impress the minds of the vulgar with reverence and awe? This is

pedantry, and mere delusion. It is quite too late a period in the history of human opinion to hope to gain respect by involving our proceedings in the petty obscurities of unwonted phraseology—it is an attempt at imposition unworthy of its supporters; but perhaps there may be some argument in favour of it, derived from the necessity of the case, or from expediency.

If we conjecture aright, the original intention of the institutors of Latin examinations was not so much directed to the dignity or respectability, as to the expediency of the measure. In their time the Latin, as we have already mentioned, was the medium of intercourse between the learned—the language of lectures and of books. The terms of art, the description of the parts treated of in anatomy, the crude notions of the day in physiology, and the science of disease, were all couched in the same idiom. The mother-tongue was defective in the necessary means of expression, and it was ordained, as a matter of course, that the proficiency of candidates who aspired to the honours of the profession should be ascertained through the ordinary language of literature and science. How completely the whole state of things is changed in our own times, it would be impertinent and commonplace in us to explain; but it is abundantly evident that no reason grounded on necessity can any longer be put forward as a pretext for the continuance of the practice. Nor is it less evident, that it affords no test whatever of the candidate's talents, or of the depth of his research in the acquisition of medical knowledge. Whatever profit in after-life he may derive from them (and we are fully persuaded of the solid worth of much of our neglected medical literature), the *student* is neither expected to be conversant with the works of Morgagni,

Baglivi, or Boerhaave,—not to mention others more antiquated; nor in the extensive range of subjects laid down for his examinations, would it be possible to form even a superficial acquaintance with those writers. Were there a course of reading of the latter description prescribed (as many of the authors to whom we have just alluded have never been translated into our language), there might be some shadow of reason for keeping up our familiarity with the corrupt Latin idiom of the schools; but, as it is, when new systems altogether prevail—when the older writers are treated with a contemptuous neglect—and when, above all, we can boast of a vernacular tongue, at once the most rich, copious, and expressive perhaps in the world—is it not the height of folly and absurdity to cramp ourselves with the fetters of a foreign and dead language*?

Another view of the case imperatively demands our notice. We feel it to be our bounden duty, as public journalists, to watch minutely over the interests of our profession, and to denounce, with severest stricture, any proceeding which may lead to the intrusion of unworthy members into it. We, therefore, cannot help farther considering the Latin system as eminently calculated to cloak the insufficiency of certain candidates, whilst it forwards the impudent pretensions of others. It is easy to conceive—nay, it is well understood by most of our readers—how, in examinations of this sort, the faltering and imperfect expression of a candidate, proceeding generally as much from ignorance of his business as from the difficulty of using a language which he is obliged to speak, perhaps, for the first and

only time in his life, is but too frequently imputed to the latter cause; while, on the other hand, an assumed boldness and flippancy will most assuredly carry a more confident, though, mayhap, an equally ill-prepared candidate, over a multitude of errors and mistakes: and all this, even supposing the examiners themselves to be the best prepared in the world for judging of merit through the medium of an “unknown tongue.”

Let us not be misunderstood: we should be sorry to be thought capable of decrying the usefulness of classical literature. As a branch of general knowledge, and as the best basis for the superstructure of a complete medical education, we hold it to be perfectly indispensable to the accomplished practitioner, both as a gentleman and a scholar. A familiarity with the classic writers of Greece and Rome will impart to his mind an elegance and elevation of sentiment — will improve his reasoning powers, and bestow on him a command of language scarcely attainable from any other source; and we cannot but express our regret that its great importance is so much overlooked in the multitudinous schemes for the improvement of medical education which hourly issue from the press. But surely classical literature has nothing to do with the barbarous system of Latin examinations. It is worse than barbarous; it has not a single good quality in its character to redeem it. That it is no test of merit, either in the candidate or his examiner, we have shewn; that it is injurious, and dangerous, inasmuch as it affords to unqualified persons an easy ingress into our profession, we have endeavoured to prove. We shall now merely add a few words on another of its characteristics, and have done with it for the present.

It is pretty generally known to what a low state the faculty in France was reduced by the exquisite ridicule of Mo-

* See Dugald Stewart's *First Diss. Sup. Encyclo. Brit.* for an interesting account of the present state of our native tongue. The late Marquis of Hastings, in an address to the members of the College of Calcutta, in 1814, paid a proud tribute to the strength and beauty of the English language.

liere; in fact the effects of his satire are felt in that country up to the present day. That there is no engine more powerful than ridicule, when wielded by an able hand, and directed against a system of no very sound constitution, is as familiar to our minds as a proverb can make it. And it should not be forgotten that it was on the mummery of Latin examinations that Moliere fastened the tenacula of his wicked wit. The concluding ballet of the "*Malade Imaginaire*" is indeed a legacy bequeathed to posterity with his dying breath*. Yet in these kingdoms the obnoxious proceeding has survived with extraordinary pertinacity of existence. The faculty has patiently endured the shafts of ridicule levelled at her by some of our ablest writers; but how much longer she will be able to withstand the attack remains to be seen. Even the lowest classes of society are every day growing more and more enlightened, and they are no longer to be imposed on by the plausible externals of ancient usages. In short, we have scarcely room to doubt but that the absurd ceremonial in question will ere long share the fate of many of its predecessors; it must shortly be reckoned among the vanities that are not. By the better sense of our contemporaries this relic of the wisdom of our ancestors will be abolished. For our own parts, we are almost ashamed of having attempted, in so serious a mood, to expose it. On reflection it looks somewhat like "breaking a butterfly;" yet the humblest exertion in the cause of truth and plain-dealing, possesses a degree of merit sufficient to save it from being contemned. We may even be tempted to add some further observations upon it on another occasion.

* Moliere died in enacting the character of Argan, in that admirable comedy.

MR. LAWRENCE'S LECTURES.

In our number of October the 17th, we stated that the insinuations in the *Lancet*, that Mr. Lawrence corrected the proofs of his lectures for that Journal, were wholly and unequivocally false. This has been confirmed by Mr. Lawrence withdrawing from the *Lancet* his permission to publish his lectures, and therefore it is unnecessary to dwell longer upon it.

But we also at the same time used these words—"It will scarcely be credited, but it is nevertheless literally true, that Wakley had the impudence to advertise the publication of that gentleman's (Mr. L.'s) lectures before he thought proper even to acquaint him with his intentions." The exact extent to which we were justified in making this assertion will appear from the following extract of a letter from Mr. Lawrence, dated Nov. 10:—"I do not know whether the observations in the latter (i. e. the passage from the *Gazette* quoted above) refer to the advertisement of my lectures in the *Lancet* without my consent to the publication, or to the advertisement. I am not aware that the Editor of the *Lancet* advertised these lectures before asking my consent to the publication. I gave no consent to the advertisement, nor was I aware, until you informed me, that they had been advertised." Although our accusation against the Editor of the *Lancet* was only verbally with respect to the advertisement of the lectures, and is therefore borne out by the above extract, still we must state, that the impression conveyed to our minds by Mr. Lawrence's language at the time the conversation took place was, that his expression of ignorance extended to the Editor of the *Lancet*'s intentions as to the publication of his lectures, and not as to their mere advertisement—which appears, from the above extract, to have been the case.

DR. BURROWES.

WE had intended to make some remarks on the extraordinary transaction in which this gentleman's name has lately been involved; but as in the following explanatory remarks he implies that more information will appear in a court of justice, we suspend our judgment till the whole evidence comes before us. Meantime we think it right towards Dr. Burrowes to give insertion to his explanation, so far as it goes.

From the Morning Chronicle:—

"I have called here (Police-Office) to-day to ask the courtesy of the Magistrates to allow me to make a few observations on the publication of the proceedings in the case of Mr. Anderdon, which took place at this office a few days ago. The impression on the minds of many persons after reading that report is, that I did not make any reply to Mr. Chambers, whose politeness I am ready to acknowledge, when I told him that I should go to consult the gentleman by whom I had been employed, and return as speedily as possible to this office with the result of the interview between us. I did go as I promised over to the house of one of the gentlemen in Lombard-Street, and saw him; but as it was deemed a matter of much consultation, we at once proceeded to the residence of his legal adviser. We were there obliged to wait some time, in consequence of the solicitor being engaged, before we could have the desired opportunity of an interview. As the case was one of considerable importance, and required much deliberation how it was to be proceeded in, we remained until the matter had been fully deliberated. I then wrote a note to Mr. Chambers, and sent it off immediately: it was three o'clock when the note left the solicitor's office, and I was not at all aware that the police office shut up at that-hour; neither was I conscious, until a day or two afterwards, that the communication had not been received during the hours of business. I hope, therefore, that I shall be exonerated from the charge of neglect in this instance. With respect to the report of the other circumstances connected with this peculiarly unpleasant affair, and

which appeared in the newspapers, I cannot say at present whether there are errors in it or not; because, if I entered into the merits of the question at present, I should be betraying a professional confidence reposed in me, which would be most improper on my part. Those who know me (said the Doctor) I hope will believe that I would not act in a case of such an important nature without the greatest deliberation. I have had two interviews with the Messrs. Anderdon, that occupied several hours; and finding that a medical examination, from the peculiarity of the case, could not be entered into at the time with any degree of propriety, it was therefore deferred. I trust, however, that in the course of the judicial proceedings now pending, facts will be elicited relative to this distressing business which will exonerate me from all blame as to the manner in which I have acted throughout. The reporters, I hope and expect, will do me the justice to make the present statement known, through the same medium that their former accounts obtained publicity; and I also entreat the public to suspend their judgments of my conduct in the affair until the issue of the proceedings which I have before alluded to are known."

PROCEEDINGS OF SOCIETIES.

WESTMINSTER MEDICAL SOCIETY.

Nov. 7th.

Divisions of Small-Pox.

DR. GREGORY stated, that, relying on what he read and had been taught in lectures, he had entered into practice with the impression that the severity of small-pox was, in the great majority of cases, in the direct ratio of the number of pustules; but that he had soon found other circumstances of more importance than the one alluded to, and had ultimately been led to arrange the different varieties of small-pox under the five following heads.

1. What he called the *superficial* form of the disease—in which the eruption, whether copious or scanty, was fully developed on the skin with a well-marked scarlet areola round the poek, and with little or no affection of the mucous membrane of the fauces or air passages. This form always does well,

however copious the crop of pustules may be.

2. The *cellular* form, in which the variolous action extends from the skin into the subjacent cellular texture, and in which the glands about the throat, axilla, and groin, become implicated. This extension of the disease is apt to shew itself at a late period, giving rise to boils, abscesses, and other mischiefs, which greatly retard convalescence, and occasionally prove fatal. He had known a patient die from an abscess forming under each scapula.

3. The *laryngeal* form, in which the variolous action extends to the mucous membrane of the fauces, larynx, and trachea, interfering essentially with the function of respiration, impeding the oxygenation of the blood, and being, in consequence, attended with a peculiar claret colour of the pustules. The other mucous membranes—as those of the alimentary canal, bladder, vagina, urethra, &c. are incapable of taking on the variolous action; but in the larynx it sometimes runs so high as to produce sloughing—a specimen of which the Doctor exhibited. Even the eye, which so frequently suffers from small-pox, Dr. Gregory affirms to do so from common inflammation only; the pustule on the cornea not appearing till the eruption is on the decline, and therefore not being a primary or essential feature of the disease. This form of small-pox is very fatal; the eighth and ninth days being those of danger.

4. Some persons, especially those liable to cerebral affections, die at an earlier period—generally *within* the first eight days. These cases are ushered in by fierce delirium, succeeded by symptoms of effusion into the brain. Corresponding appearances present themselves on examination after death. To this variety the Doctor gives the name of *nervous* small-pox; and he believes it to depend, not on inflammation, but on a specific or *variolous* action. That it is not, strictly speaking, inflammation, is rendered probable by the fact of the blood, when drawn at this time, not exhibiting the buffy coat, and by the little benefit derived from blood-letting.

5. The last variety is regarded as depending on the *dissolution* of the blood—marked by petechiæ, passive hæmorrhages, &c. From this Dr. Gregory never saw any patient recover who was not guarded by previous vaccination.

Rather an animated debate followed, the general result of which was, that most of those who had seen any thing of small-pox recognized the divisions proposed by Dr. Gregory as correct, and leading to useful practical consequences: still they were not admitted as distinct *species*, nor as having their seat in essentially distinct tissues—or, at least, when any besides the skin and mucous membranes were affected at all, such affections were held to be only common inflammation.

HOSPITAL REPORTS.

ST. BARTHOLOMEW'S HOSPITAL:

Case of extensive Inflammation and Suppuration of the Thigh, following Wound of Knee-Joint.

HENRY PHILLIPS, æt. 40, admitted into Pitcairne's Ward, under Mr. Earle, Sept. 13th. This patient, six weeks previous to his admission into St. Bartholomew's Hospital, had inflicted a wound on the inner and front part of the knee (which penetrated into the joint, dividing the integuments to the extent of two inches), while engaged in shaping the spokes of a wheel with a drawing knife. He was immediately conveyed to another institution. Extensive inflammation of the knee and thigh followed the receipt of the injury, which was not checked by the application of leeches and cold lotions, and in about a fortnight matter had formed in the upper and inner part of the thigh, for the discharge of which a small inefficient opening was made with a lancet. A thinnish pus continued to drain both from the artificial opening and from the original wound in the knee-joint, reducing the patient considerably; the integuments of the thigh acquired a very firm resisting texture, which went on gradually increasing; the accompanying debility became daily more manifest, alarming the patient for his safety; and at the end of six weeks he grew dissatisfied with his treatment, and, worn out with continued pain and mental anxiety, he was conveyed home, and placed himself under the care of a private practitioner. The gentleman who visited him, not feeling quite satisfied as to the nature of the case, and wishing for further advice, Mr. Earle was called in. The state of the patient at this time was as follows: Reduced almost to the last extremity, with a pulse small, thready, and scarcely to be felt; the whole body bathed in a cold clammy sweat. Mr. E. believed him to be in articulo mortis. The integuments of the thigh presented a perfectly firm, horny, or cartilaginous feel, not in the slightest degree yielding to the

pressure of the finger. There was at this time little discharge from either wound. Mr. Earle felt assured of the presence of deeply-seated matter, and of the necessity for its immediate evacuation. Nothing like fluctuation could be discovered through the hardened integuments. Mr. E. had not been apprised of the nature of the case, and was provided at the time with no other instrument than a common bleeding lancet: with this, however, an incision was made about six inches long, extending up the thigh. The lancet was first thrust directly downwards, till the shoulder was buried, and not till then did it reach the depôt of matter. The instrument was then carried upwards, cutting its way out with considerable difficulty, owing to the firm resistance offered by the horny texture of the parts. Another cut was made to communicate with a former opening. Matter followed in the whole track of the incision, and in this way a large quantity of sloughy portions and of sanious foetid fluid were evacuated. He was directed to take Carb. ammon. gr. v. 3tis horis, and lint was introduced into the wound. The patient felt relieved soon after; the pulse became more distinct; his feelings of alarm and nervous sensations gradually left him, and he felt more composed than he had done for some time previously. Mr. Earle had him removed to St. Bartholomew's Hospital, September 12th, where he continued gradually to improve. The hardened state of the skin and cellular tissue slowly disappeared, and with the use of quinine his strength was restored sufficiently to enable him to leave the hospital October 8th, with very good motion in the knee-joint, and feeling very grateful for what had been done for him.

Case of large Scrotal Hernia, reduced by general means.

John Ross, æt. 28, admitted Sept. 17th, into Powell's Ward, under Mr. Earle, with a large scrotal hernia of the right side. The man states, that, two years since, he ruptured himself while lifting a heavy weight. He felt something to give way at the time, and observed a swelling in the groin, which gradually increased, and descended into the scrotum. For the space of about two years he suffered no inconvenience from the rupture, which was always protruded during the day, and returned again upon his going to rest at night. During this time he never wore a truss. About three weeks before his admission, he found that he was unable to return the hernia as usual. He states, that, from this time, the swelling gradually increased in size, the scrotum being much more distended than he had ever observed it to be before; and its friction against the thighs causing him much uneasiness and pain, he was induced to seek relief

at this hospital. When admitted, the scrotum was found to be considerably distended with a hard and inelastic mass, which was supposed to consist of omentum; the testicle could be distinguished at the most inferior part of the scrotum; bowels not constipated. The protruded parts firmly resisted any attempts at reduction by the taxis; and as there were no urgent symptoms, it was resolved to give the emaciating plan a fair trial, with the view of lessening the bulk of the tumor by reducing the quantity of fat of which it was thought chiefly to consist. As Mr. Earle expressed it, he would try to convert his fat into soap, by the internal exhibition of the liquor potassæ.

The patient was put upon low diet, and the recumbent posture was strictly enjoined. He was ordered to take liq. potass. Mxx ter die; and with the view of assisting the absorbents, the unguent. hyd. was directed to be rubbed in so as to produce slight pyalism. The good effects of the treatment were in a short time manifest, and at the end of five weeks the plan had succeeded perfectly. The hardened omentum gradually softened and decreased in bulk, until it was entirely reduced. The neck of the sac was felt to be considerably thickened. October 24th he was ordered to have a truss, and discharged on the 27th.

Luxation of the Thigh Bone upwards and forwards on the Pubes.

Mary Hinds, æt. 63, was admitted into this hospital October 19th. She said that she slipped down stairs and fell on the right hip, with the leg under her. The dresser was not able to ascertain exactly the nature of the accident, but recognized the head of the bone, which obeyed the motions of the limb, in the groin. Mr. Vincent saw her on the 20th, and shewed the case to Messrs. Lawrence and Earle, when it was decided to be a dislocation upwards.

On examining the limb, it appeared about two-thirds of an inch shorter than the other; the toes everted and pointed downwards, so as not to allow the heel to reach the ground; the knee was also everted; the heel and knee could be brought close to the opposite limb; the femur was not bent either backwards or forwards with regard to the pelvis, and could easily be flexed to a right angle with the pelvis; it could not be rotated inwards, and but slightly outwards; by using a slight extension, the limb could nearly be brought down to its original length; the hip was flattened externally. Situation of the head of the femur, upon and rather to the pubic side of the inferior, anterior, spinous process of the ilium, having no muscle between it and that process; in front, and covering that part of the head nearest the neck, was the origin of the rectus muscle that arises from the inferior spine; external-

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ly and laterally the origins of the sartorius and tensor vaginæ femoris, which crossed the neck; on the pubic side, and rather in front, were the iliacus internus and crural nerve; the psoæ muscles and vessels still more internally; above was the crural arch; the origin of the rectus appeared the chief obstacle to still greater shortening of the limb; there was no pain or numbness from the pressure on the nerve when the limb was at rest.

Reduction was first attempted without the assistance of pulleys, the woman lying on her back, and extension made in a line with the body; but as this plan did not succeed, she was placed on the sound hip (the left), and the pulleys applied, using extension in a direction posterior to the body. Mr. Earle at the same time pressed down the head of the bone, by which means the reduction was effected in eight minutes.

The age of this woman caused suspicion of fracture of the neck of the bone. The limb was not in this case flexed either backwards, as mentioned by Boyer, or forwards, according to Sir A. Cooper's authority, by reason of the small size and weakness of the muscles of the patient. The only diagnoses between this accident and fracture of the neck, were protuberance in the groin obeying the motions of the limb, and inability to rotate the limb inwards.

Two similar accidents have occurred at the Manchester Infirmary within the four last years, the latter within ten months: in both of these the thigh was flexed on the pelvis. Another case was recently admitted into an hospital in Dublin.

GLASGOW EYE INFIRMARY.

Traumatic Cataract—Spontaneous Cure.

GEORGE ROBERTSON, æt. 11, Feb. 20th, 1829. Fourteen days ago received a blow on the right eye from a stone. It has been followed neither by much pain nor inflammation, but the lens is almost completely opaque, and appears in contact with the iris. There is a small, opaque, elevated spot on the cornea, apparently the result of a wound. Vision gone, except mere perception of light and shadow. Belladonna applied externally, and Epsom Salts given internally.

March 6th.—Conjunctiva slightly inflamed.

Gutta solutionis nitratis argenti.

13th.—A small fragment of the lens has fallen down in front of the iris.

16th.—More of the cataract fallen down in front of the iris.

Sept. 19th.—Lens dissolved. Some small shreds of capsule still in view. Pupil lively. Eye strong; and, with a two inch and a half convex lens, can read a large type.

Fistula Corneæ.

William Garth, æt. 19, 4th March, 1829. Fifteen years ago, the lower part of the left cornea was penetrated by a fork, which had also injured the iris; bringing on iritis, contraction of the pupil, and adhesion of the iris and capsule of the lens. At present the cornea around the place of the puncture is in a state of ulceration, and appears to have been bathed with a solution of sugar of lead. Close to the inner and lower edge of the cornea there is a vesicular swelling, almost the size of a split pea, which appeared about ten days ago. This was punctured, and a fluid issued from it.

6th.—Gtt. Sol. Nit. Argenti.

9th.—Vesicle has filled again, and again punctured.

11th.—Vesicatorium pone aurem sinistram.

16th.—Vesicle again filled. Zonular sclerotitis.

Cap. Pil. Calomel. et Opii, i. omne nocte.

30th.—Vesicle much enlarged. On snipping it off, it is evident that there is a communication with the anterior chamber.

A pencil of nitras argenti to be applied to the fistula.

April 1st.—Appearance of a new vesicle very minute and close to the edge of the cornea.

8th.—No appearance of the small vesicle growing.

May 4th.—Inflammation increased.

Adhib. Hirudines, vi. temp. singulis. Vesicator. pone aur. Contin. Pil. Cal. et Opii.

11th.—Pain nearly gone. Still considerable vascularity of conjunctiva.

Utatur Collyr. Mariatis Hydrarg. (a grain to 8 ounces).

12th.—Mouth slightly affected.

Sum. Pil. 2nd qq. nocte tantum.

20th.—Eye easier. Continue the pill.

June 6th.—Pain almost gone. Omit Pil. Cont. Collyr.

Sept. 19th.—Eye, for the last six weeks, quiet. Pupil completely closed. Iris in contact with cornea. Specks in the same state as at admission. Fistula of cornea completely gone. Distinguishes light and shadow. Dismissed relieved.

NOTICE.

We wish to hear again from B.

ERRATUM.

In our last, page 184, column second, line 29, for etiam read et.

W. WILSON, Printer, 57, St. John's-Street, London.

THE LONDON MEDICAL GAZETTE,

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OF

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 21, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE VIII.

Treatment of Inflammation.—Bleeding.

WHEN I spoke to you, gentlemen, in my last lecture, of disorder of the digestive organs, and of that state of the system which Dr. Barlow would have called plethora from defective secretion, I should have stated to you that, although the most common cause of this condition is excessive nutrition, or errors of diet, yet that it may occur independently of these, without any excess, and, in fact, without any imprudence in the mode of living. It may take place in consequence of certain circumstances which act immediately on the nervous system, and which affect the digestive organs secondarily.

Among the causes which are referable to this head we may mention neglect of exercise, indolent habits, sedentary pursuits, residence in the impure air of confined and crowded dwellings, excessive mental exertion, and long-continued anxiety, or affliction: all these are causes which act *primarily* on the nervous system, and which disorder the digestive organs through that medium. We see many instances in females, and often in males also, where the condition of the constitution that I have described takes place, and in which we cannot trace it to any thing like excess, or imprudence; and in such instances we are, in general, able to refer them very clearly to causes of the nature just mentioned.

I shewed you, in my last lecture, that the state produced by a considerable local injury is capable of leading to serious inflammatory disturbance in various important organs at a distance from the original affection; that the state of system arising in con-

sequence of a compound fracture, or other extensive wound, laceration, or bruise of a part, may cause inflammation of the peritoneum, pleura, pericardium, lungs, heart, liver, or spleen, as well as of the joints, and various parts of the muscular system. If, then, such important and serious symptoms can arise in the parts now mentioned, in consequence of the active disorder excited in the system by any considerable local injury, you can easily suppose that the less violent disturbance, which constitutes plethora, may be capable of producing the various local inflammations, or other diseases, which are supposed, in common language, to originate spontaneously, or of themselves, and which have given so much trouble to nosologists, in order to account for their causes and the mode of their production.

I proceeded, in the next place, to speak of inflammation, adverting first to the disease in its acute or active form, whether it occurs with or without fever. In the view which I have already had occasion to give of the disorder which constitutes inflammation, I have shewn that this is a temporary state of the part—that is, that the condition of inflammation may arise, may proceed to its full development, may then decline, may entirely disappear, and leave the part in its natural or normal state, so far as regards its functions and structure, without any treatment at all. In this respect there is a striking contrast between inflammation, and the changes of structure which occur in those affections which are denominated *specific*—those *organic* changes, as they are commonly called, such as cancer, fungus hæmatodes, and so forth; for in alterations of this nature the change seems to be essentially destructive. These alterations are so destructive to the part in which they occur, as to render it unfit for the accomplishment of its destined purposes, and they proceed till they entirely destroy the parts in which they take place. Hence has arisen the term which has been given to this peculiar kind

of change—*malignant*. But inflammation, on the contrary, seems to have a natural tendency to terminate in a state in which the part is again left capable of exercising its proper functions.

We must observe, however, that inflammation, when it is violent, dangerously disturbs, or even entirely suspends, the function of the organ in which it takes place; consequently it is absolutely necessary that it should be quickly arrested, when it affects any part of which the continued action is necessary to life—such as the brain, the heart, or the lungs; the larynx, stomach, or intestines; and the contents of the cavity of the abdomen generally. When inflammation affects any of these viscera, it is quite possible that, if the action of the part could be dispensed with for a time, the inflammation might go through its course, and leave the organ in a state capable of exercising its functions afterwards: but the danger here arises from the want of the due performance of the function during the time that the inflammation is at its height. The regular exercise of the organ cannot be dispensed with, for carrying on the purposes of life; therefore you must stop the inflammation, to prevent the effect which would otherwise be produced in the economy, by the want of a certain effect which is absolutely and indispensably necessary.

Again, the various effects of inflammation—particularly mortification, suppuration, and interstitial deposition—are capable of producing such changes in the state of the organ as to render it in a greater or less degree incapable, after the inflammation has ceased, of carrying on its regular functions: even the least important of those terminations—interstitial depositions—are capable of producing changes in an organ which will seriously and permanently impair its action. Such deposition will thicken and harden a part; it will consolidate structures that are naturally loose; it will unite those that ought to be free and distinct; it will render opaque, parts that are naturally transparent. Those various changes may arise in consequence of inflammation—not of the very highest degree: when, for instance, it occurs in a joint, induration and thickening may take place and produce a stiffness of the parts, thus rendering the limb incapable of executing many of the motions which properly belong to it. Or suppose inflammation occurring in the eye, or in the ear, parts of the utmost importance, a comparatively low inflammation will here produce such changes as will afterwards seriously impair the functions of the parts. Suppose you have inflammation in the cornea, in the iris, or in the retina—the disease may go through its stages without producing any very serious symptoms, or any very considerable sympathetic effects on other

parts of the economy; but you find, in the first instance, that interstitial deposition will take place in the cornea, which will obscure the aperture of the pupil, and render vision imperfect; in the second instance you will find, if lymph be effused upon the iris, it will cause it to adhere to the capsule of the chrystalline lens, and thus impede or actually destroy the sight; you will find that the dark structure of the retina may be thickened and rendered opaque, and thus disabled for the execution of its proper functions; and therefore, in consequence of these several changes, according to the degree in which they take place, the vision will be more or less considerably impaired. Suppose you have inflammation affecting the hand or foot, and that it proceeds to suppuration—you will find afterwards, that the skin will be rendered adherent to the tendons, and these will become agglutinated to each other. Perhaps one or more joints will suffer suppuration; and the consequence will be that the hand or the foot will have a motion so far imperfect as to render it of much less use than in its natural state. Thus, although the part affected by inflammation may not be essential to life, it is nevertheless necessary to adopt active measures, in order to arrest the diseased action, for the purpose of preventing those changes that would *subsequently* interfere with the functions of the part; and if you are to accomplish your object, you will find it necessary to use means quite as active in the one case as in the other—that is, treatment quite as diligent to stop inflammation in the joints of the hand, or foot, as if it were seated in the heart, the lungs, the stomach, or the intestines.

Farther—although inflammation should not be seated in a part which is immediately important to life—although there should be no immediate danger of consequences that would be seriously injurious to the function of the organ, yet it is a matter of great importance to arrest the inflammatory process for this reason—the longer the vessels of a part remain overloaded, with the more difficulty do they recover their natural state, and the more easily will they become again distended. The continuance, therefore, of inflammation, increases the difficulty of recovery, and the liability to relapse. Hence it happens that organs that have once been inflamed much more easily become so a second time; and the danger of a subsequent occurrence of inflammation is in proportion to the degree of the disease that occurred in the first instance, and to the length of time it has been allowed to go on. Persons who conduct the business of life assurance are well aware of this fact:—when any one wishes to insure his life, they enquire, not only whether the individual is healthy at the time that he makes such proposal, but they institute a

careful scrutiny into the state of the applicant's health in the *preceding* periods of his life—they enquire whether at any time he has had a serious disease of any kind, and if they find that he has, although he may be healthy at the time, they commonly refuse to insure his life—they consider such person to be an unsound man; and in fact if inflammation in a particular organ has taken place, there is a considerable danger of such inflammation occurring again.

Besides, in the treatment of inflammation, we are not entirely to overlook the advantage to the patient that is derived from immediately relieving him from a condition of considerable suffering. In a case of acute local inflammation, accompanied with high constitutional symptoms, this is a circumstance of no trivial importance: the local pain, and the suffering arising from general disturbance, are so great, that it is a matter of considerable moment to relieve a person from it as quickly as possible.

There are various active measures of a preliminary and auxiliary kind which are of great use, and which, although they do not immediately tend to subdue inflammation, nevertheless place the patient under a state that is favourable for the action of more direct means. In the first place, you must remove the cause of the inflammation, provided it be of a nature to allow of this: if there be a foreign body in contact with the surface of the eye—if the patient have been exposed to the application of cold—if he have suffered from insufficient clothing—these are circumstances which you can remedy or entirely remove. In respect to the position of the part which is the seat of inflammation, you must place it under such circumstances as will be most favourable to the return of blood from it. We often find in such cases, that the condition of the organ will be very materially affected by the position: if it be in a situation unfavourable to the return of the blood, the vessels will be distended, the part will become red, and considerable pain will be experienced. In a case where any part of the head is inflamed, therefore, you would have to elevate it—you must not allow the patient to lie with his head low. In a case of inflammation affecting any part of the lower extremities, you would have the patient placed in a horizontal position, and you would keep the part that is inflamed in a state of rest. The natural execution of the function which belongs to the organ would be a source of considerable excitement to it when suffering under inflammation; therefore, absolute repose of the affected organ is a circumstance generally necessary. For example—you would not allow a patient to use an inflamed joint; or if the eye were inflamed, you would not suffer the patient to exert it. Supposing the head

to be the seat of the disease, you would not permit the active employment of the mental powers by attention to any complicated matters, or by intense study. A general repose of the whole frame is equally important where an organ of consequence is the seat of inflammatory disease; and, in fact, the recumbent posture of the entire body is very favourable to the process of recovery from such inflammation. We find the pulse becomes considerably reduced when the body is placed quietly in a horizontal position. You would endeavour to remove all those local circumstances that are capable of exciting the inflamed part: all external pressure of clothes, or any thing else, should be avoided. Hence the medical attendant ought only to examine the diseased organ so far as it may be necessary to ascertain its exact state—pressure, and the various efforts that are made in such an examination, are causes of excitement that should be avoided as much as possible—we ought to feel for the circumstances of the sufferer. The patient who is labouring under any kind of inflammation should occupy a large airy apartment, the room should be well ventilated, and his dress or his bed-clothes should be light, and no more than sufficient to keep him in a comfortable temperature. These are circumstances of general operation.

When we come to consider the positive means by which inflammation is to be reduced, our first view is directed to the taking away of blood. This is the most important measure by which inflammation can be attacked; blood is, in fact, the material by which the increased action of the part is kept up. If we may be allowed to use figurative language, the obvious increase of heat in the part is analogous to that of fire, and blood is the fuel by which the flame is kept up; in fact, if we could completely take away its blood from the part, we should be able entirely to control or arrest the increased action. Loss of blood, then, is the most powerful means for arresting the increased local action, and for quieting the general disturbance which is the consequence of this. All other means are of minor importance—this is the great remedy on which we have to depend in diminishing and removing inflammation.

Bleeding is either *general* or *local*. In *general* bleeding, the blood is drawn from a large vessel by a single orifice: it may be taken either from a vein or from an artery. In the former case, the process is called *venesection* or *phlebotomy*; and in the latter case it is called *arteriotomy*.

When blood is taken from a vein in a case of decided inflammation, we very commonly find that it presents a peculiar character—that it is different in appearance from that of an individual in health: we find that the

blood coagulates slowly, and consequently that the red particles sink in the clot or crassamentum, so as to leave the upper part of this free from the colouring matter. The upper part of the crassamentum of the blood thus presents fibrin or coagulated lymph in a pure state, free from red particles—we find that it has a yellowish appearance, that it presents what is called a *buffy coat*, and very commonly that it coagulates more considerably than under a natural state, so that the superior surface of the clot has a concave figure—that is, in common language, it is *cupped*. The blood, then, drawn from a patient labouring under inflammation, is commonly said to be buffed and cupped; the surface of the crassamentum being of a light yellowish colour, in consequence of the precipitation of the red particles, and being drawn together, so that it assumes the appearance of a cup. I say, this is the appearance the blood presents when taken from the vein of a patient labouring under inflammation; and you will naturally enquire whether it is not also the appearance of the blood drawn from an artery. Now the truth is, that the practice of drawing blood from an artery is by no means so common as that of venesection, and therefore it is difficult to determine whether the arterial blood presents the change which we have just described, nor do I know that I ever had an opportunity of ascertaining the point exactly; but my friend Dr. Tweedie has given me a statement of two instances in which he has found the blood drawn from the arteries to present the same character and appearance which is seen in that taken from the veins. I will just read to you the note that he has made of these cases. He says—"When I was house-surgeon at the Infirmary in Edinburgh, I was directed to bleed a patient under the care of Dr. Hamilton, afflicted with hæmatemesis (vomiting of blood): the general febrile symptoms were very severe. I attempted to take blood from the veins of the arm; but, from their small size, I could not obtain the quantity ordered. I then opened the jugular vein, but in consequence of the struggles of the patient, the orifice closed. I next opened the temporal artery, from which the blood came in a full stream. The blood soon coagulated, and, to my surprise, I found that it presented a cupped appearance. I shewed the blood to my friend Dr. Gordon, who told me that he had searched every where for such a specimen, and that he had written to the surgeons of the large hospitals in London to know if they had observed such an occurrence, and their answer was in the negative. It is now in his museum. I have since had an opportunity of observing the same thing in a patient of mine in the Fever Hospital, who was bled in consequence of inflammation of the brain under fever. This specimen

has since been sent to Mr. Grainger, who has alluded to it in his work on General Anatomy."

When we speak of blood exhibiting an inflammatory character, we allude to the two appearances that I have now mentioned; this buff colour on the surface of the coagulum, and this cupped appearance or concavity.

In local bleeding, the blood comes from the capillaries; it is drawn from a great number of openings in the minute vessels of the part. Blood, in this way, is taken from a part by cupping; by the application of leeches; by scarification, or by punctures. Now cupping seems to form a kind of intermediate mode of taking blood. When blood is drawn by cupping by a person who performs the operation skilfully, it differs but little from general bleeding. A skilful cupper will take twenty ounces of blood from the back of the neck as quickly as you can draw it from the arm; therefore we cannot suppose that there is any material difference between the two cases in their effects upon the system. In certain instances of cupping we cannot say that the blood is taken simply from the capillary vessels. I have seen cupping performed where arterial trunks have been divided, which have thrown out their contents in jets, three or four crossing each other in the cupping glass. When it is performed well and rapidly, I do not see the difference between the abstraction by venesection and cupping—though in the one case it is called local, and in the other general bleeding.

In this country, in general bleeding, phlebotomy or venesection is most frequently practised on the arm. The blood is taken from one of the veins at the bend of the elbow, that being found to be the most convenient situation; but on the continent, venesection is practised on the veins of the lower extremities, particularly those of the foot and leg: and the physicians and surgeons of France seem to consider that peculiar advantages arise from taking the blood in this manner under certain circumstances. They think, for example, that it is more efficacious in affections of the head. They imagine that *derivation* from the head takes place. This is a kind of scientific word, which I believe has not a very definite meaning; and, in point of fact, we have no direct evidence to shew, that in cases of inflammation, it is of material consequence whether we take blood from the veins of one part of the body or of another. Hence we come in this country to practise general bleeding from the arm, on account of a conviction that if blood be abstracted, it is of no consequence from what vein it is taken.

Since, then, there are these two modes of taking blood, viz. general and local, a ques-

tion will naturally arise—what are the cases in which the one or the other is preferable? What quantity of blood should be taken? How often it should be repeated? And what is the comparative efficacy in respect to reducing inflammation between the abstraction of blood, and the other means by which the same purpose may be accomplished?

When you hear of local bleeding, you perhaps are inclined to suppose that it would be a proper mode of attempting to reduce every inflammation. You would imagine that the best way of reducing increased action in any organ would be to take blood from the part itself; to take away from the organ that is the seat of excitement—the material which keeps up that excitement. You would therefore suppose that local bleeding would be the most direct and powerful means of reducing any local excitement. This, however, would be an erroneous conclusion. You can take blood out of a part by local bleeding, but you cannot stop the supply which goes to it. You can take away a portion of the blood that is in it, but the blood still continues to come. The question, therefore, is, how you can cut off the supply of blood from the inflamed part? This is necessary, to arrest the disturbance in the organ, and it can only be accomplished through the medium of general bleeding. If you carry general bleeding to a sufficient extent, you can entirely stop the increased action in any part, and you cannot do that by local bleeding.

Take the case of a patient labouring under inflammation of the chest. A person has a violent pain in the side; he is unable to distend the thorax fully; in short, the inflamed organs are in such a painful state that he cannot use the voluntary exertion that is necessary to fill the lungs with air. You find, along with this, heat of skin, and a state of general distress. You open a vein in the arm, and take away a considerable quantity of blood; and when you have done this, you find that the reduction of the circulating fluid will enable the patient to distend the thorax with facility; he can take in a full and deep inspiration; and the general distress that previously existed is completely removed. This will more particularly be seen if you carry the abstraction of blood so far as to produce fainting. You find that a change in the state of the respiration is produced immediately; you see the effects even while you are drawing the blood. Thus you have a clear proof that this mode of relief is capable of putting an end to the local increased action which inflammation of the pleura or lungs produces. Suppose, now, you bleed a patient labouring under considerable inflammation of the eye. You see a preternatural redness of the organ; you find that there is a great deal of pain

in it; that the patient is unable to open it against the light; that it is suffused with tears; and that any occasion to use it produces an overflow of these on the surface of the cheek. You take a good quantity of blood from the arm of the patient, so as to produce a state of fainting; immediately, and before your eyes—for you can see all the phenomena here—you observe that the part, which was of a bright colour, becomes quite pale;—the capillary vessels of the organ are emptied: in fact, you find the patient can open the eye with facility to the light, and for a time the part has passed nearly into a natural state from one of violent inflammation. You see in both these instances that the abstraction of blood generally is not only capable of checking the inflammatory process, but, for the moment, of entirely removing it. It is true that in the one case, and in the other, the inflammation will in some degree recur after the loss of this blood, but it never comes back with the same degree of violence. The effect you produce in inflammation by the free abstraction of blood—from the system, is to diminish the increased action, which never resumes its former intensity.

General bleeding, then, is necessary in inflammation of any organ important to life, such as the brain, lungs, liver, and other parts that I have formerly enumerated. It is also necessary in the case of inflammation of any organ where you suspect the probable occurrence of those changes of structure that would subsequently impair the functions of the part. Thus free abstraction of blood is necessary in inflammation of the eye, or of the ear; in inflammation affecting the hand or any important joint of the body. General bleeding, again, is necessary in serious injury of any important part, or where the injury is of considerable extent, even though it does not affect a part of importance in itself, because we know by experience that injuries of this sort will produce inflammation. We know that inflammation arising under such circumstances will be attended with considerable constitutional disturbance; and therefore the common sense of mankind, independent of the medical class, has led them to know that persons who receive injuries, such as those alluded to, ought to be bled, as forming an impediment to the actual occurrence of inflammation. Now some persons have held, that under such circumstances you ought not to bleed till inflammation has come on; that you should wait till the disturbance occurs, and that you should then take the means necessary for removing it. I cannot, for my own part, at all accede to this opinion. We know that in the laws of sporting, when a fox is started, or a stag is turned out, they hold it entitled to a certain time to make its way; this sportsmen consider as a settled law, but I do not think that we are

bound by any of these rules in respect to inflammation. We ought not to consider it a point of honour to allow inflammation to go to a certain extent before we attack it. I think we may safely take means to prevent the disturbance; and, therefore, when a serious injury takes place, more particularly in individuals of robust habit, and at an age in which inflammation is likely to occur, we should adopt the means necessary to prevent the occurrence of inflammation, which we know by experience will take place unless we do so.

It would be a desirable thing for us to lay down a rule, if we had any means of doing so, by which we could determine in all cases where general abstraction of blood should be had recourse to, and where we might be contented with local bleeding; but I rather fancy we should hardly be able to find any such general criterion. If that constitutional disturbance exists which constitutes inflammatory fever, we may safely bleed *generally*, but then we cannot say that if it is absent we should therefore be content with bleeding *locally*. There are many instances of local inflammation which require active means to arrest them, but in which a febrile disturbance of the system is not present. You may have an inflammation of the eye, which will require bleeding of the most active description, but in which there is no fever. We may say, therefore, that the existence of febrile disturbance justifies general bleeding, but its absence does not render it apparent that we should be contented simply with local bleeding.

Then supposing that we deem it necessary to have recourse to general bleeding, what is the mode in which we should employ this evacuation? Are we to take a large quantity of blood, and to endeavour, by one copious bleeding, at once to put a stop to the inflammatory action, or are we to take a smaller quantity of blood, and to repeat it? It is matter of question between a considerable and free venesection, and a repeated smaller loss of blood; and I may mention that it is more common in this country to take a large quantity of blood at once; but I believe it is more the practice, in France, Italy, and Germany, to take a smaller quantity of blood at a time, and to have recourse to more frequent evacuations. I have no hesitation in saying that the preferable plan, because the most efficacious, is that of taking such a quantity of blood as shall produce a decided effect on the circulation at the moment; that is, you are to apply a large bleeding as early as you can in the affection, and this is not to be measured, as to its amount, by the mere number of ounces. You cannot say that ten, twelve, or sixteen ounces is sufficient, but the quantity must depend on the effect produced. You are to bleed until you can reduce the state of excitement which

exists in the system, and you must carry the depletion to whatever extent is required to produce this effect. It may be necessary to take 20, 30, or 40 ounces of blood; and if, without the patient fainting, you cannot make a decided impression upon the circulation, you must go to that extent. It has often been said that you will weaken a patient very much by taking this quantity of blood; certainly, for your object is to weaken the patient. You consider that in this respect he is too strong; that he has got too much blood, or you would not take it from him at all. Your object is to weaken the patient, but undoubtedly you would wish to put an end to the inflammation by producing as little subsequent debility as you can; and I think the object will be best accomplished by taking such a quantity of blood as will decidedly influence the state of the circulation. It appears to me, when you take a small quantity of blood, and proceed taking it three times a day, or as frequently as you can, that you bring the patient ultimately to a much weaker state than if you took a large quantity at once. In short, if you take a large quantity at once, you do not want to bleed again; whereas, in the other case, you take blood day after day, and continue it for some length of time; and I have no doubt of being accurate when I state, that the plan of small bleedings accomplishes the object ultimately at a much greater expense to the constitution than if you take a large quantity at once.

Some years ago I had occasion to attend a young female—a slender girl—for a serious attack of inflammation of the chest. I bled her not very sparingly, and adopted other suitable treatment. I found it necessary to repeat the bleeding several times, and notwithstanding a considerable number of bleedings, the inflammation was not satisfactorily reduced. The symptoms in the chest continued, and I deemed the patient in danger; but her circulation was at last reduced to that state that I could not take more blood. I then resorted to digitalis, and either through the means I employed, or through her possessing a good constitution, she got over the complaint and recovered. It happened two or three years afterwards that I had occasion again to treat her under an attack of a similar nature. I was requested to see her, she being employed at an institution with which I was connected. The week before this occurred she had wanted a tooth extracted, which I removed for her: this was attended with great swelling about the jaw, so that I found it necessary to employ a great number of leeches, and take blood from the arm. At the end of the week in which these means were resorted to, I found her labouring under symptoms of the highest degree of inflammation in the chest; and although she

had only been attacked a few hours, the symptoms were of the most strongly marked kind. She was in excessive pain, and could not speak to me. There was great heat over the whole body, a white tongue, and a highly disturbed state of the pulse, which was full, strong, and very frequent. I never saw symptoms so intense brought on in so short a time; but the case was very favourable for making a decided impression, as the attack had only come on a few hours before, and I therefore bled her from the arm. She was, as I have already said, rather slender, or what we would call a weak young woman. Nevertheless, the blood spirted out most vigorously from the opening when it was made, and then flowed very freely (in cases of inflammation when the blood runs freely, I go on till it stops, for that is the only way to do good); and I got a large vessel, intending to make her faint, for I thought if it produced that effect upon her it would stop the inflammatory process. But to my astonishment she did not faint, and the blood proceeded pouring out of the arm in a vigorous stream, without running over the integuments; till at last I stopped, because the quantity taken was so considerable. I had the blood weighed, and it was found to be three pounds—that is, 48 ounces. I believe it was an ounce or two more: and yet this large evacuation did not make the young woman faint. Now that single venesection cured her, so that she was well from that time; all the symptoms were removed, at least she had no farther sign of inflammation of the chest. She was kept quiet for two or three days, and restricted to low diet: but I may say that she required no farther treatment than that single free venesection.

In those cases in which there is sympathetic inflammatory fever—that is, in which the digestive organs are disturbed, and in which the secretions are suspended—it is found, that when the secretions return, and when the digestive functions are restored, the fever is diminished, or stopped; and thus it is said that the restoration of the natural secretions removes the fever. Yet, perhaps, it might be more correct to say that these secretions return because the fever is removed. However, pursuing the analogy, many persons say, do not bleed patients that are so situated; attempt to produce depletion by aperient medicines—make the bowels act—give remedies that will reproduce the discharge from the skin, and thus you will get rid of the fever. Now the truth is, if you carefully read the history of cases treated in this way, you will find that one, two, three, or four days are employed in evacuations of this kind. Purgative medicines are given which do not act; diaphoretics are tried which produce no discharge from

the skin; while the local inflammation goes on increasing, and the general disturbance gets worse and worse; till at last, by evacuations, and the return of secretion, relief is obtained. Now it appears to me, that the treatment of inflammation by direct depletion, shews to great advantage when contrasted with the mode of treatment to which I have just referred. If you take a large quantity of blood from the system, you produce immediate and decided relief; and, in fact, you find that those objects which you are endeavouring to attain by medicines, and do not accomplish for a long time, are at once effected by the loss of blood. Very frequently, evacuation of the bowels comes on after a free abstraction of blood, particularly if you induce syncope; you also often find that the patient breaks out soon after into a profuse perspiration; the secretions that had been suspended having now been restored, in consequence of your taking away the load that oppressed the system. When this is relieved its natural actions go on properly; and thus direct depletion accomplishes immediately and at once that which, if sought for by indirect means, you do not attain for a considerable time: thus, too, we materially abridge the sufferings of the patient.

A notion has been entertained that persons who live in London, or in large towns, generally will not bear depletion—direct depletion—and that, therefore, the loss of blood which is proper in those who live in the country, is improper in the inhabitants of the metropolis or extensive cities. How this notion has arisen, or how it has become so general, I do not know; for I cannot conceive any thing more erroneous. In the inhabitants of London and large towns, we know that all kinds of luxurious indulgence which tend to produce a state of repletion in the system, are carried to a great extent. We know that sedentary habits are very prevalent, and, therefore, all the circumstances exist which are calculated to produce plethora—plethora of a serious nature—that state of the system in which high inflammatory action will occur, and, of course, in which it will require the most active and direct means for its control. I can only say that I am constantly meeting with patients residing in London who are in a state of local inflammation and general disturbance connected with it, that require the freest use of direct depletion, as I have now described it. I conceive, therefore, that the notion that a different plan of treatment is necessary in cases of the same disease occurring in the country and in London, or any other large town, is totally unfounded.

Another fear that has been entertained respecting the treatment now adverted to, is, that although it may be of efficacy in restraining the inflammatory action, yet the advantage is gained at the expense

of subsequent debility; that the patient will be weakened, and serious injury be done to the constitution, in consequence of the loss of blood. This is a fear in which I do not participate in the smallest degree. I do think there is a fear of debility from inflammation, but my fears point to that description of debility which results from the continuance of the inflammatory process—that subsequent weakening of the part which will be produced by those changes which inflammation is capable of causing in the structure of the organ. In both these cases, I think there is really ground for the apprehension of debility; but I have seen no reason to apprehend debility as the consequence of those means that are necessary to reduce such inflammatory action; so far otherwise, that I conceive the real and effectual way of preventing debility in such cases is, to adopt the most vigorous means for stopping inflammation in its early stage. It has been said that it will bring on typhoid symptoms. The words *typhus* and *typhoid* have become a complete bugbear; typhoid symptoms merely denote the state of an individual in whom certain organs are the seat of disease, and in whom the disease has gone to a considerable extent. Typhoid symptoms are by no means a necessary consequence of inflammation generally; they are merely one of the results consequent on disease existing in a certain set of organs—that is, in the nervous system. The only fear of debility in cases of inflammation generally is, that of allowing the disease to proceed unchecked, till it effects such changes of structure as will subsequently impair the functions of the part.

CLINICAL LECTURE

ON

DISTORTION OF THE SPINE.

By CHARLES BELL, Esq.

Professor of Surgery in the University of London,
and Surgeon of the Middlesex Hospital.

GENTLEMEN,

You perceive by the preparations around me the subject of my lecture; and whether it be strictly a clinical lecture or not, signifies very little. I have interrupted the regular course to take advantage of demonstrating to you, on the recent parts, the effects of lateral distortion of the spine. We have here a subject which exhibits the bones, cartilages, and ligaments of a young woman who had distortion of the trunk. These other specimens by my side are dry and rigid, but this is fresh; the cartilages and ligaments are entire, and the resiliency of the whole is perfect. I

have never had so good an opportunity of studying and demonstrating the principles which are to direct us in the treatment of this disease; and let me now tell you why I am so anxious for you to take advantage of this demonstration.

1. A mother, or a governess, brings a young lady to you for advice, observing that her shoulder is out—meaning that it projects further than the other one. Now, for the practitioner to be ignorant of the cause of this, shews that he has neglected a whole class of diseases; nay, more—that he has never been properly educated in anatomy at all. Yet I do assure you that I have had such patients brought to me, with the marks of leeches and blisters upon the shoulder, as if the joint itself had been in fault.

2. What think you, again, of condemning a young lady to lie in the horizontal posture for nine or twelve months for such a disease as this—the lateral distortion and twist of the spine? How lately is it that we had occasion to remark upon the aphorism delivered by Mr. Hunter, that the exercise of a part is necessary to retain the perfection of its texture. When you see the spinal column, consisting of bones with intermediate cartilages, with ligaments interlacing them, and numerous small muscles passing from point to point; and when you consider that these are tissues which will all degenerate from want of use—what can you imagine will be the effect of this column lying horizontally and unexercised for so many months, but the increasing weakness of all these textures? And, again, to see the young girl pale and feeble from long confinement, raised at last only by little and little, and suffering from faintness and palpitations of the heart; witnessing all this, what can you believe but that this treatment endangers the utter ruin of her constitution at her critical period of life?

3. Another error which may be committed is mistaking the distortion of the trunk for a consequence of curvature of the spine, when the spine only partakes of the distortion from a cause which is very different, and is very formidable. It happens in this way—a child has been seized with pneumonia, and has just escaped from the violence of the inflammation by the most decisive measures. She slowly recovers, but it is

found that she does not breathe with one side of her chest; the lungs have become consolidated by the inflammation; the ribs consequently remain in the state of expiration; they are huddled together, so that this side of the chest is about one-third of the size of the other; and the spine, you observe, must necessarily be curved, to accommodate itself to this condition. It will be in vain to attempt here those means of relief which are available in the proper case. I have an instance of this kind of distortion now under my observation, in a girl; and you see, in this cast, the peculiar twisted appearance which it gives to the adult.

4. But there is another case allied to this—I mean deformity from original malformation of the chest. The bones conform, in a very curious way, to the state of the parts which they cover: if there be no brain, neither is there a cranium; if the brain be imperfect, the imperfection is shewn in the cranium; and so in the thorax, the narrow and twisted chest is not the cause of disorder in the lungs, but it is the mark of imperfection in these organs. Sometimes we find that this imperfection is on one side only, and then the spine is distorted. This is an irremediable distortion.

5. Here is another circumstance requiring extreme circumspection. You see in these specimens that a callus has formed, which has united two or three of the vertebrae together, forming a sort of bony splint along the bodies. Now, in distortion, it is necessary to mark this well; and if, in examining the spine of a young person, you find that there is a curve towards the lower part of the spine, and that the vertebrae do not move at all, you must be very guarded in your practice. You must consider well whether previous inflammation has not had its seat here, causing the formation of such a callus; for it is possible that this interruption to the motion of the spine might be broken, and then there is reason to believe that the spinal marrow might be endangered by the communication of inflammation to it.

6. I have said nothing to you of the mistakes that are occurring every day, in confounding the scrofulous caries of the spine with lateral curvature. As to the case of distortion arising from *mollities ossium*, it takes place in the adult, and the symptoms are so marked that it can never be confounded with the cases which we are

about to describe. But rickets is a frequent source of mistake, and you must be especially careful, when consulted in a case of lateral distortion, to examine, by the means which I shall presently describe, whether the disease is in the spine and trunk alone, or is common to the whole bones, and attended with distortion of the ossa femora, tibiae, and pelvis. Enough has been said, I hope, to show that these questions must frequently come before you in practice; and now let me prove to you how satisfactorily we may draw our principles of the treatment of the lateral distortion of the spine from the study of the anatomy.

You observe, that when I place the bones of this trunk so as to rest upon the ossa ischii, the spine, whilst it is distorted in a very remarkable manner, possesses its elasticity, so that I can make the upper part of the trunk wave from side to side, the pelvis remaining stationary. This would imply that nothing should be more easy than to straighten the spine, or to undo this curvature, seeing that the chain of bones is

so very pliant. But in matter of fact it is not so : and when you look more minutely to the texture of the spine here, you will find that the distortion is not in the bones alone, but in the cartilages, the ligaments, and even the muscles ; for the muscles adapt themselves to the condition of the bones ; and therefore it is that nothing short of giving a new direction to the growth of the spine and all its connexions, will cure the lateral curvatures. You perceive, that by pressing on the left and lower part of the spine, and against the upper right side of the thorax, I can change the form of the spine from that resembling the italic S to the straight line ; but the moment I relieve the pressure, it resumes, by its elasticity, the curved position.

When a patient is brought to you, it is not unfrequent for the governess, or mother, to say, we observe the haunch on the right side (the superior anterior spinous process) to project. You see the reason of this ; for the spine ascending from the pelvis, as from a base, is inclined towards the left, and carries this part of the trunk off from that side of the pelvis.

In all these specimens and casts around me, you see that the first deviation of the spine from the straight line, at the lower part, is towards the left. I had occasion so lately to speak of the inclinations of the pelvis as illustrative of the diseases of the hip-joint, that you will easily follow me now when I speak of its effects upon the spine. The origin of the complaint we are treating of, is in the languor, relaxation, and weakness of a young girl. She has not that spring of health and vigour in her muscular frame to give a variety of exertion, and of position to her body. When standing, as they say in the north, she *hangs* upon her feet. I do not wish to vindicate this scotticism ; but to use a word not in your vocabulary, to distinguish what I mean from standing firmly on both legs. There is, you know, a provision in the lower extremity by which you can stand, resting yourself, as it were, and hanging on the ligamentous connexions of the limb, without muscular effort. A young person throws herself upon the right leg, as being the strongest, and the pelvis consequently drops towards the left side. The sacrum, which you may consider as the pediment of the pillar, being inclined, the whole column is thrown towards the left. The

first deviation being thus accounted for, we now inquire what is the cause of the second curvature of the spine. You will observe that the first position throws the weight of the body to the left side ; but that would be a most painful and irksome posture to remain in ; the person has, therefore, a disposition to relieve that constrained position by balancing the body ; and this cannot be done in any other way than, as you see here, by bending the spine towards the right side. There is a circumstance of some consequence to be noticed in the explanation of the further effects. We find that the young person who is distorted, stands mostly on the left leg. This is a consequence of her condition ; for, I have remarked to you, that standing on her right leg was the means she had recourse to at first, for relieving muscular exertion. Now the standing on the left leg facilitates the formation of the upper curvature of the spine, since it tends to bring the head and shoulders once more towards the left, and thus to be perpendicular to the line of gravitation of the body. Before we leave this subject, you will observe, that the spine is not simply inclined to the left, then to the right, and finally to the left again ; it is at the same time twisted ; and I must show you the effects of this spiral distortion on the hip and on the loins. The first effect is, a thrusting out of the hip and glutei muscles on the left side ; and the next is, a pressing out of the sacro-lumbalis and longissimus-dorsi on the same side ; for, you perceive, in the skeleton in my hands, how the transverse processes of the vertebræ of the loins are prominent on the left side, while those of the right disappear in this aspect, from being turned forwards. These processes, then, thrust out the muscles on the left side, whilst they admit of a concavity or flatness on the right. You will observe also that there is a prominence of the transverse processes in the dorsal part of the spine upon the right side, and a depression of them on the left. The effect of this twisting of the spine in producing a prominence of the long muscles of the loins on the left side is the first indication of commencing distortion, and is the last that disappears in the process of cure. We seldom see this first stage alone, because the mother's attention is not drawn to it before there is distortion of the upper part ; but when there is one of a family

distorted, producing an anxiety about the younger girls, you may then perhaps perceive in them that the disposition, which, if neglected, will produce distortion of the shoulders, has begun, and is exhibited in the unequal protuberance of the muscles of the loins.

Now let us attend to the effects produced on the ribs by this lateral curvature and twist of the spine. I demonstrate to you that the ribs on the left side fall together, or collapse; not only is there no proper space between them, but you see they hang over one another like the scales of armour; and the ribs on the right side diverge and bulge out. When I move the spine from side to side, you see that there is a mobility and expansion on the right side of the thorax, of which the left is not capable. Nor can you be ignorant of the cause of this; for if I represent with the chalk on the board the ribs going off parallel from the spine, right and left, the curve to the left side must huddle the ribs together on that side, and unnaturally extend or separate them on the other. Suppose I draw a line representing the curve in the dorsal vertebræ, and draw lines across this curve, always taking care that each line is perpendicular to the curved line, at the point where it crosses it: you see the effect—that the lines converge upon the left side, and diverge upon the right. The effect, you readily perceive, is a diminution of the convexity on the left side of the thorax; the false ribs also are pressed in upon the abdomen, and the margin of the chest approaches the ilium. As to the effect of the twist of the spine—it brings these false ribs of the left side too far back, and by a corresponding deficiency on the right side, produces a flatness on the lower part of the thorax, with an unusual gibbosity or projection on the upper part.

Observe now the effect of this upon the shoulders. The mother, drawing down the tucker of her girl, and exposing the lower angles of the scapulæ, holds her hands up in dismay, for she sees the right project at an acute angle, whilst the left falls down into the hollow of the side. You perceive, however, that the shoulders or scapulæ have nothing to do with the deformity—their position is consequent on the different convexities of the ribs on which they lie. The greater elevation of the ribs on the right side, and a certain projection of their angles, throw up the scapula

and shoulder, and elevate in an especial manner the lower angle, which again draws up the latissimus dorsi. The very reverse is the condition on the left side; because the scapula lies on the depressed and flattened ribs.

Now see, after this description, how you try back, as the sportsmen say. The mother brings her child with the right mamma and shoulder prominent: you trace this to the convexity of the upper part of the thorax on the right side; that is consequent on the upper curvature of the spine; the upper curvature of the spine is consequent upon the lower curvature; and the lower curvature upon the inclination of the spine upon the pelvis; and the inclination of the pelvis is (as I have explained) consequent upon the mode of standing or sitting.

Thus, gentlemen, I have laid the foundation of your understanding this subject securely on the anatomy; and not on the anatomy of the dry bones, which, for ought you know, may be artificially distorted; but here you see the texture of the whole trunk is loose and elastic, and yet the parts lie with that unnatural relation to each other which exhibits the distortion to be a consequence of a universal accommodation of all the parts—muscles, tendons, ligaments, cartilages, to the forms of the solid bones. I shall not go further into the discussion of the treatment in this kind of distortion, which is distinguished by the term lateral curvature; but I shall take an early occasion to draw your attention to those instances of *disease* of the spine of which we have many examples in the hospital.

REMOVAL OF A LARGE PORTION OF THE SCAPULA.

To the Editor of the London Medical Gazette.

SIR,

SEEING a short notice of an operation, which I performed on the scapula, in your last number, I have taken the liberty of sending you a more lengthened detail of the case, thinking that it might prove interesting to your readers. Should your opinion so far coincide with mine, I beg you will insert it in your pages.

I am, Sir, yours, &c. &c.

J. LUKE.

1, Broad Street Buildings,
Nov. 9th, 1829.

Jane M'Carthy, a healthy looking little girl, with a clear fair complexion, aged 14, was admitted, October 6th, 1828, a patient of the London Hospital, for a tumor which occupied the lower part of the dorsum of the left scapula, a little above its inferior angle. It was at this time about the size of a small orange, adherent, and growing from the surface of the bone, and following all its motions. It was well defined, yet softish and elastic; painful, yet not inflamed or discoloured on the surface of the skin. She complained of nothing but the tumor. She had no difficulty of breathing, nor cough; her bowels acted regularly, and she had no pain in the abdomen, nor headache. She attributed the origin of the tumor to carrying a child on the arm of the same side, which she conceived had strained the shoulder. It was only five weeks since she first observed the tumor, but she had experienced much pain in the part for more than five months preceding. Since she first discovered the tumor, it has increased in size up to the time of admission; attended with heat of the surface.

The case was considered one of medullary sarcoma, becoming developed with extraordinary rapidity. Ordered *v. grs.* of Plummer's pill to be taken every night; 10 leeches to be applied to the tumor every other day; the goulard lotion to be used continually; milk diet; and, lastly, to be kept perfectly quiet in bed.

October 9th.—The tumor has much increased in size, and is evidently fast approaching the spine of the scapula. It has also become much more painful, and the skin more tense and hot. The motions of the arm produce much uneasiness, while an aching sensation continues permanently at the seat of disease. Another tumor has also sprung from underneath the scapula, extending from the anterior costa towards the axilla. It is not of any considerable size, but seems to be connected with the venter opposite to the tumor on the dorsum, and follows all the motions of the bone. Ordered the pill, lotion, and leeches to be continued.

10th.—The tumor still increases rapidly, both on the dorsum and venter. That on the dorsum advances towards the spine of the scapula; that on the venter towards the axilla, under the *latissimus dorsi*. The pain and tension have also increased. Ordered to continue as yesterday.

14th.—To-day, at 1 o'clock, she was conducted into the consulting room, for the purpose of obtaining the opinion of the other surgeons of the hospital. The tumor had considerably increased in size, and had become more painful, and the skin tense. It now occupied nearly the whole of the infra-spinal fossa, with the exception of a small portion near the cervix, and had become more prominent. The tumor, from the venter, had extended deeply into the axilla. The dorsal tumor, when pressed with the finger, felt elastic and fluctuating, as if containing a fluid. This feel, together with the rapid development of the tumor, seemed to give some colour to the opinion that the disease was abscess. Yet the feel towards the axilla militated against such an opinion, for this was solid, and the scapula moved easily upon the chest. It was, however, thought advisable to determine this point fully before any ulterior steps were proposed, by puncturing the tumor with the lancet. This I accordingly did, and gave exit to a quantity of blood, mixed with a brainlike substance. On introducing my finger into the opening, I found that it passed into a soft pulpy mass; and thus, whatever doubts might before have existed as to the nature of the disease, were now removed: it was decidedly medullary sarcoma. The next point for consideration was the ulterior step to be taken. We had before us a disease intractable in itself, and uniformly producing fatal consequences if not removed by operation; and the operation itself very frequently, if not most frequently, unsuccessful, from the disease returning either in the cicatrix or in some distant part. The disease, too, was making such rapid progress that a very short time would put all debate about the propriety of an operation out of the question. It had already advanced to such an extent as to require the removal of a very considerable portion of the scapula, and the laying open of nearly the whole axilla, for its perfect insulation from the surrounding structures. Every thing required that an operation, if determined on, should be done promptly, to render it likely to save the patient. There were many difficulties, too, which seemed to militate against its performance; such as its magnitude, the fear of hæmorrhage, the difficulty of insulating the disease; the danger, the uncertainty as to the use which would be enjoyed in the member

after the recovery ; to which I may also add, the want of precedent for the removal of so large a portion of scapula under similar circumstances. It was determined that, notwithstanding these difficulties, it would be advisable to make an attempt at least to save our patient by removing the tumor, and so much of the scapula as should be required for its separation.

For this purpose my patient was placed upon a table, on her right side, with her face inclined a little downwards. The arm was raised by an assistant from the side, so as to expose the axilla ; while the clavicle was depressed as much as possible upon the first rib, in order to admit of compression of the subclavian artery, which was directed to be done by means of a pad.

Having placed myself behind my patient, I made an incision through the skin, beginning at the axilla, and extending it along the axillary margin of the tumor and anterior costa, and then with a sweep around the inferior angle to within a short distance of the spine of the scapula. I extended a second incision from the commencement to the termination of the first, along the lower margin of the spine ; also through the skin, which being drawn upwards, exposed the spine and adjoining muscles. The muscles lying over the supra and infra-spinal fossæ were next divided in the direction which I proposed to saw through the bone. Thus the back part of the deltoid, and corresponding portion of the trapezius, the teres minor, infra-spinatus, and supra-spinatus, were cut through down to the scapula. By grasping the tumor and inferior angle in my left hand, the scapula was steadied while I sawed it through, in a direction extending from a little behind the glenoid cavity to a little above the superior angle, which latter, therefore, was removed. To effect this the spine was sawn through near to the root of the acromion ; after which the levator scapulæ, sub-scapularis, the insertion of the trapezius to the root of the spine, and the rhomboidei, were divided ; and the base of the scapula dissected off from the ribs towards the axilla. The tumor was next to be dissected from the axilla ; for which purpose it was grasped in the left hand, and drawn out, while I cut close upon my fingers with the other. I was under the necessity of laying bare the axillary nerves and artery ; the lat-

ter of which could be seen pulsating down the arm ; so close did the tumor reach to these parts. The vessels divided at this part of the operation poured out blood pretty profusely, but were soon compressed by prompt assistants. The teres major, part of the latissimus dorsi, and serratus, were subsequently divided, and the tumor detached, leaving a very large surface of wound exposed, and the extremity perfectly loosened from the trunk. There were twenty or thirty vessels requiring ligature ; some of which, in the axilla, were of considerable size, and close to the trunk of the axillary artery itself. There was not, however, much difficulty experienced, nor was there more than a pint, or a pint and a half of blood lost. She bore the operation remarkably well, and did not faint. When the vessels were attended to, the wound was brought together by straps of adhesive plaister, leaving a very little interval between its sides, considering the magnitude of the surface exposed. The arm was secured to the side by a bandage carried around the chest, and the fore-arm placed in a sling ; by which means the requisite degree of fixity was given to the whole member.

After being placed in bed, she complained of considerable pain in the part, but did not appear much reduced by the operation. Ordered xxx. drops of laudanum, to be taken immediately. In half an hour, the pain continuing undiminished, xx. drops more were given, with the effect of procuring ease ; after which she continued free from pain for the remainder of the day, and slept a little.

The tumor, on examination, presented the ordinary appearances of medullary sarcoma arising from bone. It was composed of a brain-like substance, with spiculæ of bone extending into it from the surface of the scapula. The consistence of the dorsal and ventral tumors differed in the first being more pulpy than the last. Their limits were defined, and their circumference vascular. Their size was sufficient on the one hand to fill nearly the whole infra-spinal fossæ ; on the other to extend from the venter, opposite to the first, deeply into the axilla. The surface of the scapula, although rough from projecting spiculæ, did not appear to have been absorbed ; hence the bone formed a septum between the two tumors. The tumor had been completely insulated,

and was invested by the scapular muscles. About three-fourths of the scapula had been removed, embracing the whole but the glenoid cavity, neck, acromion, and a small portion only of the spine and fossæ; and the following muscles divided — deltoid, trapezius, levator scapulæ, rhomboideus major and minor; supra-spinatus, infra-spinatus, teres-minor, teres-major, latissimus dorsi, serratus magnus, and sub-scapularis.

15th, 8 A.M. — Has slept nearly through the whole night, and continues free from pain. There is but little acceleration of the pulse. The skin is scarcely more hot than ordinary; and there is not much thirst, but she feels a little sick. Ordered saline effervescing mixture, with 3ij. of Epsom salts, every two hours.

7, P.M. — Has slept much during the day, and has no pain. She breathes freely, but rather quick. Pulse 140; skin hot and dry; tongue furred, attended with thirst, but is moist upon the surface. Bowels have not been relieved; the sickness has gone off since she took the first dose of the mixture. She is rather restless, and complains of her position in bed, and also of the hardness of the straw of which the bed is made. A feather-bed was substituted, and her position changed by raising her head with pillows. Ordered to continue the mixture until the bowels are relieved.

16th, 8 A.M. — Has passed a comfortable night, having slept some hours. Pulse 130; skin hot and dry; tongue furred on the edge, with a dry brown streak in the centre. Complains of thirst, and has little or no appetite. Bowels have been relieved once by the medicine. Ordered to continue.

1 P.M. — The bowels have been relieved copiously two or three times, and she feels better. There has been much discharge from the wound, which has soiled the bed and bandages, and smells offensively. The outer dressings were therefore removed, and the discharge cleansed away. There was little or no tumefaction; and the sides of the upper part of the wound were discovered, through the intervals of the remaining plaister, to have adhered. Fresh outer dressings were applied, and the arm secured as in the first instance. During the operation of dressing she fainted.

8 P.M. — Complains of pain in left breast, over the pectoral muscles, which is increased when she makes a deep inspiration. There is a slight swelling, apparently produced by an unusual contraction of the muscle, as the shoulder is drawn preternaturally forward. She is in every other respect easy, and disposed to sleep. Pulse 136; skin warm, and rather moist. Tongue more moist, but still furred and brown in the centre. She is evidently weak, and slides down in bed. Ordered to continue the mixture every four hours; 1 gr. of calomel, with $\frac{1}{2}$ gr. of opium late at night; and to apply x. leeches to the swelling on the pectoral muscles.

17th. — Pain in the tumor has subsided; the pulse is less frequent; the skin more moist; the tongue more moist; and loosing its brown streak. The bowels have been relieved, and although weak, she appears to be much improved. Ordered to omit the mixture; to repeat the pills at night; and to take some beef-tea.

18th. — The wound again dressed, and going on well. There is a clean granulating surface at its lower part, while the sides of the upper have coalesced. General health improving; strength increased; and appetite better.

Nov. 10th. — The wound has been dressed daily, and is healing. She has now acquired sufficient strength to sit up a little, and every thing is going on favorably.

Jan. 2d. — To-day she is sufficiently well to leave the hospital, having improved unremittingly up to this time. There is still a very small surface of wound unhealed, not larger than a small bean. She has not yet been permitted to use her arm, to ascertain what power or motion she possesses.

20th. — The wound healed within a few days of her leaving the hospital, and the cicatrix is now firmly closed. We thought proper to make some few trials of the strength which the arm possessed, and the degree of motion which she enjoyed. She stated that she experienced a sense of weakness of the whole limb, which prevented her from lifting more than light substances, such as her work while sewing. All attempts at lifting heavy articles were attended with pain of the shoulder, which compelled her to desist. Thus, when requested to lift from a chair a moderate sized octavo bible, she was unable to raise it

more than a few inches, and again laid it down, from pain and fatigue. She possesses the free motion of the forearm and hand, and can move the arm forward, but not upward or backward, nor can she rotate the arm in either direction. She is in good health: she was requested to use the arm as much as she could conveniently to herself.

Sept. 20th, 1829.—My patient again paid me a visit at the hospital, since which I have had many opportunities of witnessing the extent of power and motion which she has gained since her visit in January. I was now much gratified in observing how nature had accommodated the parts to the new state of things; for although the motions of the limb were not so perfect as before the performance of the operation, yet she enjoyed much more than could have been reasonably anticipated. She possessed motion sufficient to enable her to perform with ease all her ordinary household duties. The motions forward and backward were perfect, and in fact more than ordinary, the limb moving with more than usual pliancy, but yet there was considerable power. She can also perform the actions of rotation outwards and inwards. The elevation of the arm from the side cannot be easily accomplished, and requires the aid of the opposite hand to raise it to a horizontal level. She possesses considerable power, and can lift with ease moderately heavy substances. Thus, she can nurse an infant on the arm almost with the same ease as before the operation. If, however, the weight be greater than she can conveniently carry, she immediately experiences a pain in what may now be called the superior angle of the scapula, which is rendered prominent, and the skin over it tense. The muscles of the arm are not shrunk, with the exception of the deltoid, which sinks under the projecting acromion. The cicatrix has become much enlarged since the healing of the wound; it seems perfectly healthy and firm, but when pressed upon appears tender. The trapezius and rhomboid muscles are so united to the cicatrix and skin that she possesses the power of moving both at will, independently of any other part. She is in perfect health, with the exception of an occasional headache, and has had no return of the disease during the twelve months which have elapsed since the removal of the tumor.

LITHOTRITY.

To the Editor of the London Medical Gazette.

SIR,

HAVING witnessed with great satisfaction the demonstration of M. Civiale's instruments for performing the operation of lithotry, made by Mr. Costello, before the Westminster Medical Society last Saturday evening, it occurred to me that a few practical remarks upon the results likely to ensue from this important discovery would not be unacceptable to the readers of your Journal, the more especially as the discussion which took place at the society above alluded to was too restricted in point of time to allow a fair *summing* up of the question at issue, between the operations of lithotry and lithotomy. Nevertheless, I am not vain enough to suppose that, in the few remarks which I now have to offer upon this subject, I shall satisfy every objection, or make what is so clear and apparent to my own mind, equally convincing and satisfactory to others. But I will waste no farther time in prefatory remarks.

Those who witnessed the display of the mechanism of the instruments shewn by Mr. Costello, and the power they evinced in seizing, crushing, and breaking down the calculi which were operated upon, must be convinced, I think, that the instrument possesses in reality the necessary facilities for effecting the purposes in view. Its complexity is not greater, certainly not more than is perfectly consistent with its safe and effectual management in the hands of any person who will take the trouble to give his attention, for a very limited time even, to the principles of its construction; nor must it be considered as an objection that it *does imply* considerable dexterity and manual tact in its application; and what great operation in surgery does not require the same qualifications? Nor must it be forgotten that this operation is not one that starts up at once, assuming a perfect shape; that it has arrived at its present state of comparative perfection (perhaps still capable of much improvement) only by slow and progressive steps; that it is not the result of fortuitous circumstances, but is a truly scientific application of the principles of mechanics, for a purpose and in a situation to which no insuperable objections can be raised either by

the anatomist or physiologist. That there are difficulties attending this operation, no one can doubt; and I, among others, was much impressed with the very candid manner in which Mr. Costello stated those difficulties; and this brings me at once to consider the objections raised against the operation of lithotritry. These are of two kinds; one set of objectors confining themselves to the difficulties and embarrassments likely to ensue in performing the operation, the other party advocating the perfection, facility, and safety of the present mode of extracting calculi by the lateral operation. I will begin with the last class of objectors; and I will ask whether it be really true that the lateral operation of lithotomy be, as was asserted, simple, easy, and safe. Abstractedly considered, it may be a matter of surprise that so much importance should be attached to making a clean cut through skin, cellular membrane, and a few muscular fibres, into a cavity not very sensible in itself, nor much addicted to inflammatory action of an acute kind; but every surgeon will nevertheless allow, if he be not afraid to avow the truth, that he approaches this operation with trembling and apprehension, and that arising from results which perhaps cannot be argued upon, but which are every where felt. It is true that, in some hands, the lateral operation of lithotomy has been eminently successful; but that success has usually been confined to certain situations or seasons, or has ceased altogether with the life of some particular person. Those who are conversant with the history of surgery, need scarcely be reminded of particular examples; but to shew the universal feeling as to the dangerous nature of this operation, let us only observe the armoury of different instruments that have been proposed for effecting this one end: knives of all kinds, gorgets, some at a particular angle, the *bistouri cachée*, strait staffs, &c.: all demonstrate, as plainly as any language can speak, the apprehensions that have suggested these various alterations or changes. Add again, whence arises, if not from the same source, the different modes which have been at various times suggested of making the opening into the bladder? Hence has arisen the high operation, the lateral operation, that called the recto-vesical, besides many little variations in the lateral operation made by almost every

one who has undertaken its performance. Now with regard to the ratio of mortality following this operation, I am almost afraid to speak; but I *know* it to be greater in proportion, not only than that of any other operation in surgery, but I believe I might say of any two of the most capital operations put together. This mortality proceeds sometimes from obvious causes, but at others it occurs contrary to all expectation; is even not to be understood upon inspection of the body after death, and has therefore been referred to the shock which the system receives at the time. Of the obvious causes we have hæmorrhage, enlarged prostate, diseased bladder, diseased kidney, peritoneal inflammation, and often inflammation and sloughing of the cellular membrane connecting the bladder to the neighbouring parts. This is a formidable, but it is a true list of casualties, and its accuracy will, I am convinced, not be denied by those who have either performed lithotomy or witnessed the result of its performance on the large scale. Now any operation which can be substituted for one so replete with accidents and so pregnant with danger, which, at the same time, offers as certain means of getting rid of the calculus at a less risk of life, cannot but be hailed as a vast improvement in the art of surgery; and this brings me to consider the objections raised to the operation of lithotritry. No one will deny that enlarged prostate gland, diseased bladder, affections of the kidney, old age, and broken health, are all formidable drawbacks to the success of the lateral operation of lithotomy; they are also objections to lithotritry, but they are not *greater objections*—they do not *forbid* its performance—which, in the other instance, they frequently do: they would only dictate to the operator a greater degree of caution, and induce him not to continue the action of the instrument for too great a period of time at one sitting. The only *real obstacle* to the performance of lithotritry, is the presence of stricture in the urethra; and it is obvious that this objection also applies to the lateral operation, for a staff must be passed into the bladder by the urethra even in that case; and therefore, though the objection applies certainly with more force in the operation of lithotritry, it is still an objection to the lateral operation. It has been said that the lithotrite may grasp a fold of the bladder;

that in some cases (a flat stone, for example) the difficulty of seizing the stone may be very great; that should the calculus be sacculated, it cannot be laid hold of at all; that the instrument may break in the bladder; and, finally, that a fragment or more may be left; thus laying the foundation for a second calculus. I pass by the objection to the mode of sounding by an instrument of a greater curve than usual, because practical men must be aware that this is not a difficulty inherent solely in this mode of exploring the bladder, which is in no case infallible; but that, as the bladder is distended previously with water in the operation I speak of, this difficulty is thereby, in some measure, diminished. First, as to the chances of grasping a fold of the bladder, it must be recollected that the bladder is filled with fluid, and therefore the probability of such an accident is greatly lessened; but as it has once confessedly occurred, it must be admitted likely to happen again, though the improvement in the construction of the instrument renders this not so likely as it formerly was. Now, considering that the *touch* of a stone, however small, may be easily recognized; that the three branches of the instrument are of unequal length, and that the index would mark the extent of their *closure*, it is not probable that this accident should occur in the hands of a skilful and careful operator; but if it does, would not the sensation of a soft substance included within the instrument, which must necessarily be nearly closed, be detected by the surgeon?—and is there any thing to prevent him, then, from opening the instrument, so as to let go the substance he had grasped, and then to withdraw it a little towards the centre of the bladder? Secondly, if the stone is flat, it may be difficult to seize. This is admitted; but as it is only a difficulty, and not an objection, it may be got rid of by renewed trials, and that manual dexterity which practice gives. Thirdly, should the stone be sacculated, it cannot be got at by this instrument. This is true, and would undoubtedly prevent its use in such a case; but this circumstance is a very rare one, and may be admitted to be an objection in every mode of operating. Fourthly, the instrument may break in the bladder. This objection will scarcely be made by any one who has attentively examined the ma-

terials and strength of the instrument; it may be fairly said, therefore, that this charge is chimerical and groundless. Fifthly, a fragment of the calculus may be left in the bladder. True; but as the instrument can crush and break these fragments to the minute division of one or two lines in diameter, it can scarcely be supposed that such fragments will not be enabled to pass through the canal of an urethra which has been previously stretched by the use of bougies; and this brings me to observe, that though many persons have imagined that obstacles might exist to the passage of a straight instrument into the bladder, yet, as this is a matter to be settled merely by practice, and which reasoning alone can never decide, I may confidently appeal to that practice, as proving that, in this respect at least, no difficulty does exist. Again, it has been urged that a very hard calculus might resist the action of the lithotrite; but those who have seen its powerful operation will admit at once the unreasonableness of such a supposition. I have thus hastily and cursorily passed in review the principal objections brought against lithotritry; I have contrasted its probable results with those of the lateral operation for lithotomy; and I come to the conclusion that the former operation is applicable to every case in which the latter has been employed, and that, in difficult cases, it affords the patient a more rational chance of safety. It can only be by an appeal to facts, and a statement of numbers, that the superiority of this new mode of getting rid of so dreadful a disease as stone in the bladder can be confirmed; and to that statement I feel confident the supporters of lithotritry may fearlessly appeal. This operation has been performed many hundred times on the continent; it is now getting into notoriety in this country, and it will be no very difficult matter to shew that a great proportion of those who have been so operated upon have been permanently relieved, whilst their sufferings and danger have been greatly diminished, and the instances of failure, or fatal result, have been comparatively rare. I have to make many apologies for the defects of this sketch, which has been written in haste and on the spur of the moment.

J. BACOT.

Portugal Street, Nov. 16th.

ON THE
MEANS OF AFFORDING
RESPIRATION TO CHILDREN IN
REVERSED PRESENTATIONS.

By JACOB BIGELOW, M.D.

Professor of Materia Medica in Harvard University.

It is familiar to obstetric practitioners, and is noticed by most writers on midwifery, that in those cases of labour in which the body is delivered before the head, a considerable degree of danger exists in regard to the life of the child. Rules for the conduct of such cases are laid-down by writers, yet it cannot be denied that, in the hands even of skillful practitioners, many children which are alive when the body is expelled, are irrecoverably lost before the head can be extracted. In these cases death takes place because the connexion with the mother is interrupted, by compression of the cord, or detachment of the placenta, before a communication with the atmosphere is effected.

It is the object of the present paper to show, that in many such cases the life of the child may be saved, by forming a communication between the mouth and the atmosphere, previous to the delivery of the head.

After the body is expelled, if the head can be seasonably delivered, either by the recurrence of pains, or by the successful efforts of the practitioner, no difficulty ordinarily occurs. But this desirable state of things cannot always be realized: too frequently the size of the head, and the resistance of the pelvis or soft parts, renders the delivery difficult and hazardous, and the practitioner, in the midst of his efforts, is apprised, by a convulsive jerk or spring of the body, that a state of extreme danger exists, and that the time has come at which the child must breathe, or will speedily die. If at this period the fingers be introduced, so as to reach the mouth of the child, it will be perceived that each jerk of the body is attended with a gasp, and convulsive effort at inspiration, performed by the mouth and chest of the child. In this state of things, if air be conveyed to the mouth of the child, it will immediately breathe, and the efforts of nature, as will hereafter be shown, may in

most cases be safely waited for to assist in expelling the head.

The method to be pursued in conveying air to the mouth, depends upon the situation of the head. If the chin has descended low in the pelvis, so that the mouth rests upon the perinæum or lower part of the sacrum, and can be readily reached by the fingers, the hand of the operator alone is sufficient to give the assistance required; but if the mouth is situated so high in the pelvis as to be reached with difficulty, or if, from the large relative size of the head, there is much compression, the assistance of a tube may be of use. The mode of proceeding which I have found successful in various instances is as follows:—As soon as the body and arms are extracted, supposing the face towards the sacrum, an assistant supports the body, carrying it towards the pubis; or the reverse, should the position of the face be to the pubis. The accoucheur should then introduce the hand to which the face looks, till the middle fingers rest upon the mouth of the child; the hand is then to be raised from the throat of the child, making the ends of the fingers a fulcrum, and pushing the perinæum backwards: the air will thus pass upwards as far as the chin of the child. The middle fingers are now to be separated, about half an inch from each other, and thus a complete passage will be formed between them, by which the air will reach the mouth of the child. If the child be in a healthy state up to this period, it will immediately breathe and cry, and the delivery of the head may be safely postponed until the natural pains recur. If, from any degree of asphyxia, the child does not immediately breathe, it may often be made to do so by dashing cold water upon the body, or by other stimulating processes. It has even appeared to me practicable to inflate the lungs, in some cases, through an elastic catheter. When the mouth is so high in the pelvis as to be reached with difficulty, or when the compression is so great as to obliterate the cavity between the fingers, a flat tube will be found useful, made of metal, of spiral wire covered with leather, or of elastic gum, and having its largest diameter about half an inch. If the tube be of metal, or of any incompressible material, it should be withdrawn during a pain, to prevent contusion of the soft parts, and immediately

replaced, if the pain subsides without expelling the head. Such a tube may be considered as a prolongation of the trachea, and is fully sufficient to sustain life by respiration for a considerable time. The tube must be guarded and directed by keeping it between the fingers of the inserted hand.

The following are a part of the cases which have occurred to me in practice, affording an opportunity for the trial of this method:—

CASE I.—A patient was in labour with her second child, August 8th, 1824. The case was one of breech presentation, and without any unusual occurrence the body and arms were delivered in about three hours after my arrival. The position of the head was of the most common kind, with the vertex above the pubis, and the face in the lower part of the hollow of the sacrum. At this time my left hand was passed upward, with a view of depressing the chin, but the child being large, it required some effort to reach the mouth with the fingers. The time consumed in doing this was too great for the safety of the child, and the convulsive spring of the body took place. I was forcibly struck at the same moment by perceiving a gasp of the mouth at the ends of my fingers, and the idea occurred that if a communication could be made to the atmosphere, the child would respire. Attempts were made without success to extract the head by a moderate force, aided by the efforts of the mother and by pressure made by an assistant over the fundus of the womb. At the same time the hand which rested over the mouth and throat was raised a little, and the fingers opened to give passage to the air. The child soon gave another convulsive spring, and at the same moment inspired. The hand being retained in the same position, a slow, but constant respiration continued, accompanied with a low, moaning cry, for eight or ten minutes, when the recurrence of a pain caused the head to be delivered. During the whole of this period, before the final pain, the mouth was several inches within the perinæum.

CASE II.—This case occurred May 1st, 1826, and was also a breech case. Being a first labour, it was protracted for 18 hours. After the presentation was ascertained, I had made, in a hasty manner, a tube about five inches long, and half an inch wide, slightly flattened,

and slightly bent over at its extremity. The case being one of more than common interest, I provided myself likewise with forceps. Although the mother had been in perfect health, yet the body of the child, when expelled, was found emaciated and dark coloured, exhibiting marks of feeble life. As much force as it was thought justifiable to use was employed to extract the head, with no other effect than to bring the mouth within about two inches of the edge of the perinæum. The tube was now introduced, and placed in the mouth of the child, but it did not respire. It will be observed, that the child had exhibited no convulsive effort, nor any signs of being alive. An attempt was now made to inflate the lungs, which failed, apparently from want of tightness in the tube, the joining not having been soldered. It nevertheless appeared to me practicable to have inflated the lungs in this situation, with a suitable tube, since the tightness with which the perinæum covers the face would assist in preventing regurgitation of the air. The foregoing attempts having proved unavailing, the forceps were introduced, with the aid of which the head was extracted. The child was resuscitated with great difficulty, and did not breathe spontaneously, until artificial respiration had been kept up, by inflating the lungs through a quill, for more than half an hour. It was two hours before the respiration became so perfect that the child could be left to itself. I have no doubt that this child would have respired before the birth of the head, had there been sufficient constitutional vigour to produce the effort.

CASE III.—March 29th, 1827.—This patient had had five children. In her sixth labour the presenting part was found to be the arm. The pelvis being large, and the parts dilatable, no difficulty occurred at the proper time in introducing the hand, rupturing the membranes, and finding the feet, which were brought down, and the body delivered. The face turned towards the perinæum, the mouth was easily reached, and the fingers were opened to give passage to the air, as before described. No struggle nor attempt at inspiration, however, occurred. A handful of cold water was then dashed upon the body, upon which the child immediately gave a spring and began to cry. The head was not delivered until some minutes afterwards.

CASE IV.—In a case of twins, Jan. 29, 1829, the first child presented the nates, and was born with the face to the sacrum. After the delivery of the body, the fingers were passed up to the mouth of the child, and opened, to give passage to the air. As in former cases, the child began to cry in a low voice, with slow respiration, the mouth being two or three inches within the perinæum. Feeling secure in regard to the life of the child, I determined in this instance to use no extractive effort, but to wait for the expulsive action of the uterus. In the meantime I called the attention of the females who were present to the crying of the child, which continued without interruption, though the head and neck were buried in the pelvis. In a few minutes an expulsive pain threw out the head with very little assistance on my part. The presentation of the second twin was natural.

CASE V.—This occurred in the same patient as Case III. In this labour, the presenting parts were the breech and left hand. After the birth of the body, the face was found so strongly pressed against the sacrum, as to render it difficult to form a passage for the air. By a gentle extractive force, the head was made to descend lower in the pelvis, and a tube was placed in the mouth. The child in this situation respired, and, after a few minutes, with the assistance of a pain, the head was easily extracted.

The foregoing practice is not new, though it appears to have been lost sight of by most of the later writers on midwifery. I am not aware that it is mentioned by Smellie, Denman, Hamilton, Burns, or Dewees. Merriman alludes to it as a thing which is possible, but does not speak experimentally on the subject. In one of the older writers, however, a practice nearly similar is described, and warmly recommended from the author's experience. In Pugh's *Treatise of Midwifery*, published in 1754, are the following instructions:—

“The arms being brought down, the head only remains to be extracted, which must be done with as much expedition as possible, as indeed the arms ought to be; for when the child has passed the navel, the circulation between it and the mother is stopped, from the pressure of the umbilical rope. You must then introduce the fingers of your left hand into the vagina,

under the child's breast, and put the first and second fingers into the child's mouth pretty far, so far, however, that you are able to press down the child's tongue in such a manner that, by keeping your hand hollow, and pressing it upon the mother's rectum, the air may have access to the larynx; you will soon perceive the thorax expand, as the air gets into the lungs. Many authors make very little trouble in extracting the head; but without a well-formed pelvis, every operator must know there is difficulty, and great danger of losing the child by its stay in the passage; but by this method of giving the child air, I have saved great numbers of children's lives, which otherwise must have died.

“Before I made use of this method, and pressing externally to assist in extracting the head, I found many children were lost in this situation for want of air, which put me upon inventions; as likewise a third, which was a curved flattish pipe; as likewise a flexible one, that I introduced into the child's mouth as near to the larynx as I could, the other end external, which I found answer; but now, as I find my fingers generally answer, I seldom make use of it*.”

ANALYSES OF BRITISH MEDICAL JOURNALS.

EDINBURGH MEDICAL AND SURGICAL JOURNAL.

October 1829.

[Concluded from last number.]

Case of Poisoning by Arsenic, with observations; and of Fracture of the Ribs, with Rupture of the Pleura Costalis, in progress towards a cure. By EBENEZER GAIRDNER, M.D. Fellow of the Royal College of Physicians, &c.

In this case the patient died within fourteen hours of the time he had swallowed the poison. The only circumstance worthy of remark as to the symptoms, is, that he had cramps of most of the voluntary muscles—that they were found to retain their rigidity

* American Journal of the Medical Sciences.

After death—and that the heart was contracted and firm, “like cartilage.” The quantity of the poison swallowed is supposed to have been about half an ounce.

A Sequel to Reports on the Diseases of Plymouth. By EDWARD BLACKMORE, M.D. Physician to the Plymouth Public Dispensary, &c.

This is one of a series of papers, containing much valuable information on the subject of medical statistics; but of which, from the numerous tables, and multifarious points embraced in it, no just idea can be given within our limits.

On a new Mode of employing the Nitrate of Silver as a test for Arsenic. By PATRICK FORBES, D.D. Professor of Chemistry, King's College, Aberdeen.

Dr. Forbes, after detailing some objections to the ordinary method of proceeding in the attempt to detect the presence of arsenic, thus explains his own plan—

“The following mode of procedure avoids all the sources of ambiguity arising from the presence of muriatic acid or any of its combinations, or of the alkaline phosphates; and it is so simple, that any person, at all capable of performing chemical experiments, may conduct it in a satisfactory manner.

“1. The suspected liquid must be carefully filtered, and if very viscid, may be diluted with *warm* distilled water. If after filtration it has colour, it should be diluted with distilled water till the colour has *just* disappeared. A solution of nitrate of silver (which precipitates free muriatic acid and all its combinations, decomposes all the alkaline phosphates, and precipitates the phosphoric acid in combination with the silver, but has no effect by simple affinity on arsenious acid) is then to be dropped into it till all precipitation ceases. The liquor must again be filtered, and solution of nitrate of silver added, when no precipitate will appear if sufficiency of nitrate of silver has been formerly used. If any precipitate do appear, an *excess* of nitrate of silver must be added, and the liquor again filtered. Take now a small glass rod, and dip the point of it in a solution of

pure ammonia, and just touch the surface of the liquor with it; in a few minutes, if any arsenious acid be present, abundance of the well marked yellow precipitate of arsenite of silver will diffuse itself down through the liquor.

“2. Great care must be taken to add very little of the pure ammonia. The reason is, that the pure ammonia in excess has the power of dissolving the arsenite of silver. This property of ammonia affords, therefore, a second decisive test; for, after the precipitate has been fully formed, it is only necessary to add ammonia in excess, when, if the precipitate be arsenite of silver, it will on stirring be perfectly dissolved, and the liquor will appear colourless as before.

“3. By adding nitric acid to this colourless liquid till the ammonia is neutralized, the precipitate of the arsenite of silver may be again made to appear,—which affords a third proof of the nature of the precipitate.

“4. The precipitate may now be collected, mixed with black flux (both being made quite dry), put into a glass tube, and the arsenic sublimed and condensed in its metallic state.

“It will be observed, that I have not directed the contents of the stomach to be boiled before the test is applied. The reason of this is, that it is wished to prevent the union of the arsenious acid with any free alkali which may happen to be accidentally present, which would prevent the success of this process. The application of *warm* distilled water on the contents of the stomach in the filter will, however, be found sufficient to carry along with it all the arsenious acid, and will not in any way interfere with the future steps of the analysis.

“The use of nitrate of silver employed in the above manner in the detection of arsenious acid recommends itself by its simplicity, and by the ease with which the substances employed may at all times be procured. But it by no means supersedes the employment of sulphuretted hydrogen, which also affords excellent indications of the presence of this poison. Every liquor supposed to contain arsenious acid should be subjected to both these re-agents; and if both these tests exhibit the appearances which ought to follow their use if arsenic be present, there cannot remain the smallest doubt on the mind of the

analyst, and he will be enabled to give his testimony with the most unhesitating confidence.

"If any one wishes to satisfy himself of the accuracy of the method now detailed, he has only to make a mixture of any muriates, alkaline phosphates, solution of arsenious acid, decoction of onions, coffee, &c. and to proceed as above directed.

"It deserves attention that the precipitate must be guarded from the *direct rays* of the sun, which will immediately turn it black from the presence of nitrate of silver and vegetable matter."

On the Use of Quinine in the Ague of Dublin, and its power in accelerating Mercurial action. By WM. HARTY, M.D. Member of the King's and Queen's College, &c. &c.

Dr. Harty has been led to believe that ptyalism is much more easily induced when mercury is combined with sulphate of quina, than when exhibited alone; nay, he is of opinion that in some cases the mercurial action, after it has subsided, may be reproduced by giving the quina alone, and without any repetition of the mercury.

Case of Intestinal Obstruction successfully treated by Mechanical Means. By ALEXANDER RUSSEL DUGUID, M.D. Kirkwall.

Dr. Duguid was called to a patient labouring under intestinal obstruction, in a part of the country at a distance from any place where medicines could be obtained; and some doses of castor oil, croton oil, &c. having been exhausted, he was obliged to trust to mechanical means for the relief of his patient: he thus describes his proceedings:—

"Dilatation of the rectum with warm water, thrown up by Weiss's powerful syringe, was next resorted to. As soon as about a pint and a half were thrown up, he complained of much pain and distention, and it was returned with great force in spite of my efforts to prevent it, and without any trace of feculent matter. This was frequently repeated with the same result. I then introduced the elastic tube of Weiss's instrument, well oiled, about ten inches into the rectum, and finding an

obstruction to its further passage, I fitted the syringe to its extremity, and continued to exhaust the air for a minute or two; but this having no effect, I attempted to push the tube past the obstruction. After some difficulty, and repeated trials, I gained a few inches, when all at once, to my great satisfaction, the resistance was overcome, and a copious discharge of very fetid flatus, with some liquid feces, took place through the tube, with almost instant relief of the distention and pain of the belly. I then fitted the syringe to the extremity of the tube, and pumped out a large quantity of feculent matter, of the appearance and consistence of yeast. When this was too solid to pass through the tube and syringe, so as to choke the instrument, a quantity of warm water was thrown in, and the pumping process resumed. In this way a great accumulation of feces was brought away, with total relief of all the symptoms. Upon withdrawing the tube, the cause of the obstruction, which indeed I had previously surmised, became very apparent, by the thin streaks of hardened feces with which the tube was coated on various parts of its surface, and which were confined to that portion of it which had passed the region, about ten inches from the anus, where the great difficulty of introduction had been experienced. An opiate enema was now administered, and I left my patient at eight A.M. of the 11th. A purgative mixture of senna and salts was sent him, which operated well, and left him convalescent."

On a New Mode of applying Galvanism without giving a Shock. By K. T. KEMP, Esq.

"Let us suppose a patient about to be subjected to galvanism by means of a common galvanic battery; that he is to receive it through the arms, across the chest; and that the circuit is to be formed by two brass balls, to one of which is attached a single wire, and to the other two distinct and separate wires. The trough being charged, the person takes hold of one of the balls, say that which has the single wire attached to it. The extremity of this wire is to be placed into the first cell of the trough, where to remain. The patient is then, with the other hand, to lay

hold of the other ball having the two distinct and separate wires attached to it, one of which wires the operator places into the second cell of the trough, while he retains the other in his other hand. The patient has now been subjected to the influence of two plates; but the intensity of the galvanism from two plates is so very weak, that not the least sensation is produced upon him. The operator now inserts the last mentioned wire, which he retained in his hand, into the third cell, he then lifts the wire which is in the second cell, and places it into the fourth, and so on, lifting each of the two wires which are attached to the one ball, alternately, taking care that one of them always forms the circuit while the other is moved forward.

"In this manner, at each removal of the wires, the quantity of galvanism added to that which is already circulating is so small, that no shock is perceived; while the general effect is distinctly experienced on the system as the wires are moved forward. Instead of adding one plate only at each removal of the wire, two, four, or six, may be added, as no distinct shock is perceived from that number; and in this manner we sooner accumulate the necessary intensity. When the patient has been subjected to a sufficient intensity of galvanism, the wires are to be removed backwards in the same manner, to prevent a shock being received.

"The effects of this modification of galvanism on the system are very peculiar. As the wires are gradually moved forwards, a slight sensation of heat and a kind of prickling is perceived in the hands and wrists, accompanied with a general glow of heat in the region through which the galvanism passes. As the number of plates is increased, a powerful tension of the muscles and accelerated circulation ensue.

"The beneficial effects of galvanism appear to depend entirely upon the passage of the fluid through the system, whereby an increased action of the different organs is induced, and the various secretions promoted; and in no degree upon the shock received, which is nothing more than the entrance of the fluid into the system, or rather, the superinducement of a particular state upon it. And, without doubt, the more gradually this is effected, and the more imperceptibly the system is again brought

into its natural state, the greater will be the benefit derived."

Mr. Kemp is of opinion that this mode of applying galvanism is particularly indicated in cases of suspended animation.

Account of the effects of the accidental inhalation of the Gas of burning coal in the Wanlockhead Mines By WM. WATSON, Esq. Surgeon, Wanlockhead.

The usual effects of such a cause, viz. head-ache, giddiness, vomiting, tremor, &c. &c. resulted in this case.

Case illustrating the origin of Tubercles in Inflammation. By JAMES LOMAX BARDSLEY, M.D. Physician to the Manchester Infirmary, &c.

In the body of a man, aged 42, who had suffered much from syphilis, the following appearances were found in the chest:—

"The left lung was much condensed, owing to considerable grey tuberculous infiltration. The apex of the right lung was studded with numerous tubercles of a grey colour, and its substance was altogether impervious to air; somewhat lower down the tubercles were less fully developed, and the pulmonary tissue was more vascular; but towards the inferior part of the organ, the inflammation of the pulmonary substance was most marked, and only a few tubercles were present. The shades of difference in these degrees of vascularity were very evident to the eye; and a striking difference in the states of density of the pulmonary tissue was also discoverable to the touch. These appearances are well shown in the drawing, which was taken from the diseased portion of lung shortly after its removal from the body."

It is on these appearances that the supposed value of the case depends, which, in Dr. Bardsley's opinion, strikingly confirms the opinion "that inflammation often precedes the deposition of tuberculous matter in these organs." To us we confess that the simultaneous occurrence of tubercles and inflammation in one case, forms very insufficient grounds for the above

deduction, and particularly as the tubercular depositions were least considerable where the inflammation was most strongly marked.

MEDICAL GAZETTE.

Saturday, Nov. 21, 1829.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

EXTERNAL RELATIONS OF THE PROFESSION.

THE division of labour in the profession has been a subject of remark with many persons, but we do not know that much has been said, however much may have been thought, of a matter of at least equal interest—the division of the profits. It is certain that immense sums of money are annually extracted from the pockets of his Majesty's liege subjects by the multitude of those who offer to them the sanatory resources of the healing art; and though it would puzzle the most subtle metaphysician to determine whether the remuneration of such services comes under the head of voluntary or involuntary actions, it must be allowed that there is nothing compulsory in the matter. No; John Bull is at perfect liberty to take advice without physic, or 'doctors' stuff' without consulting any one; to eschew all tampering with nature, or to poison himself; and, if we may be permitted the expression, to "go to the devil his own way!" And yet one would conclude, from the hue and cry that has been raised of late, that this important privilege was in danger. A moment's glance, however, at the thriving condition of those contemners of etiquette, who, while angry parties are contending for rights, run away with the main substance of all these questions, will convince any one of the contrary. The fact is, that although our colleges are appointed to see that the public do not take by the hand any

one not properly introduced and authorized by them, there is a good deal of very improper flirtation with those free personages who have forgotten to take out a license. In spite of all that professors have pronounced upon the duty of adherence to legitimate institutions, the multitude are still going astray. It is not enough that the pure and retiring candidate for favour gently insinuates his accomplishments, and "bears his blushing honors thick upon him;" the mass of mankind require something practical, and we find them following after those who are willing to make all the advances. The recommendations of regular practitioners are often written in a manner too fine for the general eye. Their less scrupulous rivals emblazon their pretensions in characters so large that those who run may read! In a dilemma so perplexing, what then is to be done? We should be very sorry to recommend any thing contrary to the dignity of modest and unpretending worth; but we have witnessed a good deal of professional coquetry, and duly appreciate the mixed feelings of those who are hesitating on the brink of active life, who would approach but dare not. To these we would hint that our profession requires not only abstract study but practical application; that it is not in consequence of ignorance that unlearned men have succeeded, but from their meeting the demand of the market; that it is the business of those who ought properly to supply this demand to impress the world with the conviction that, as a class of men, they are superior to amateurs and quacks. We are persuaded, from reflecting upon the success with which so many of these apes of scientific practitioners address themselves to the wants and fears of the community, that there is something wrong in the adaptation of the profession to public uses; that there is a reserve and prudery among us which obstructs the

efficiency of the most gifted. But why are these things hid—why have their gifts a curtain before them? There is no class of persons more decidedly required to be men of the world than we are; no calling in which monkish qualities are so little in repute as in our own; and yet, with all that has been preached about the internal economy of the profession, but very little attention has been paid to its external relations with society at large. We are deficient in activity and *esprit de corps*; we do not interest ourselves about many matters where medicine has a divided claim with other arts and sciences; we allow this neutral ground to be taken up by a set of interlopers, who are neither one thing nor another; and we have our own sluggishness to blame. But *fas est ab hoste doceri*. We are nothing, if not servants of the public: the most accurate system of medical policy would fail in its ultimate end—utility, if it did not enable men to communicate their acquirements, and join to the *savoir* a certain portion of the *savoir faire*.

MR. EARLE AND THE LANCET.

THE old saying of "having caught a tartar," is excellently illustrated by the subjoined letter, which the Editor of the *Lancet* has drawn upon himself by his defiance of Mr. Earle, and daring that gentleman to vindicate his late address to the students who attend his Clinical Lectures. The straight-forward and spirited conduct of Mr. Earle on this occasion is in keeping with his general character; and the unanswerable manner in which he has exposed the falsehood and duplicity of the common traducer, is such as to place that worthy in no very enviable situation.

The facts are briefly these. Wakley had been in the habit, for a considerable period, of doing all he could to injure Mr. Earle's reputation; a purpose, to

accomplish which he had recourse to calling him ridiculous names, to malicious insinuations, and to direct and positive falsehoods. During the last few months, however, Mr. Earle has, strange to say, been treated in a manner totally different; the *sobriquet* by which he had been designated was changed for his proper name; his cases were carefully reported; his remarks faithfully recorded—nay, the pupils have been recommended to attend his lectures; and, lastly, these lectures have been published. All this, however, we are now told, was done in irony! This is not quite fair; the Editor ought not to veil the brilliancy of his wit too much, but to have some consideration for the duller humour of his readers—else he must be content to be his own audience, and laugh at his jokes himself.

One of our earliest recollections is of an old gentleman who was an inveterate punster, but, like Wakley's irony, his wit was sometimes of that peculiar kind which no one but the author comprehends: now whenever a joke missed fire, his wife invariably said, "that's a pun;" and, of course, the expected laugh was sure to follow. We advise Wakley to adopt the old lady's plan, and, instead of following up the subject three months after with an explanation, to put at once as an addendum—"This is in irony."

The circumstances above-mentioned led to an idea, among those who did not know Mr. Earle, that he had in some way sought the change; in fact, that he had done something to effect it. Here, however, the matter would probably have rested, had not he received a formal application from the acknowledged reporter to the *Lancet*, in his official capacity as such, for the notes of his lectures, backed by all those professions as to the sentiments of his employer to which we alluded in a former number.

The indirect and more distant hints

of Mr. Wakley's *attachment* had been passed unnoticed; but this was going a step too far, and Mr. Earle took the most prompt and effectual method of shewing to the world the contempt with which he spurned the adulations of his quondam reviler, by publicly expressing his sentiments, in an address to his class.

One would have thought the dilemma rather a puzzling one even for Wakley; but not at all: he has only to adopt a certain figure of speech, that he has always at command, and which often serves those who have nerve enough to use it freely. He has but boldly to deny point blank whatever it does not suit him to admit. To be sure it requires his readers to be fools, but he has often drawn so successfully on their credulity that he is not to be easily disconcerted. Grant him but a certain portion of faith, and as to the rest "'tis as easy as lying." "It is not true," says the Editor of the *Lancet*, just as confidently as if he expected to be believed. To what extent an assertion of the *Lancet*, taken *per se*, may be good for any thing in the remoter parts of the island, we know not; but it can only be upon his country readers that he can hope to impose by such monstrous absurdities.

In former times, when lances, and not *Lancets*, were wielded for men's destruction, if any one of honourable blood denied the statement of another, they held a tournament, and tilted for their honour and their lives before assembled multitudes. Now so chivalrous has our contemporary grown, that he wishes to restore this ancient custom: he offers to come to St. Bartholomew's, attended by his reporter, as his squire, "on any evening that Mr. Earle may appoint," then and there, for the instruction and edification of the pupils, to enter into mortal combat with Mr. Earle touching the insult offered to his spotless honour. If Mr. Earle does not accept this most wise proposal, it will be evident to the whole

profession, adds the valiant Editor, "that he dare not."

We never before read such a piece of fanfaronade even in the pages of the *Lancet*. A pretty scene it would be for Mr. Earle, or any respectable man, to have a common blustering bully admitted to his class-room to insult him. We have already said, and we repeat, that the person who communicated to Mr. Earle, Wakley's expression of respect, and who asked him for his notes, was Mr. M'Cristie, the reporter of the *Lancet*. Wakley will probably deny that he sent him; nay, we doubt not that he deputed him to speak to Mr. Earle instead of doing so himself, on purpose that he might deny it if the bait did not take. He contented himself with throwing out *feelers*, that he might draw back if it was requisite; and we doubt not but that those over whom he has sufficient influence will be forthwith instructed to eat up their words again—if their conscience be not "*too tender*." The whole letter of Mr. Earle we dare swear we shall be told amounts to nothing.

Are, then, the statements of Mr. M'Cristie nothing? Are the damning charges of Mr. Weekes nothing? Were the expressions of "respect" communicated through Dr. Armstrong nothing? Were those of Mr. Fay nothing? Was the total change in the manner of speaking of Mr. Earle, in the *Lancet*, nothing? Was recommending the pupils to attend his lectures, nothing? Was publishing these lectures, nothing?

Why then the world, and all that's in't is
nothing,
If this be nothing.

MR. EARLE'S ANSWER TO WAKLEY'S DEFIANCE.

*To the Editor of the London Medical
Gazette.*

SIR,

In requesting your insertion of the following letter to the Editor of the *Lancet*, I feel that an apology is due from me to my more respectable brethren for

condescending to notice the ribaldry of his publication. I beg to assure them that I have been actuated by the consideration that in addressing the Editor, I was in fact addressing his readers; and by a conviction that the abuses of the press can only be satisfactorily restrained through the medium of the press. I have sent a copy of this letter to him, and have claimed his promise to publish it.

I am, Sir,
Your most obedient servant,
HENRY EARLE.

George-Street, Nov. 16, 1829.

To the Editor of the Lancet.

George Street, Nov. 15, 1829.

SIR,

For the first time in my life I condescend to address you in reply to your slanderous observations—your bold defiance—and your barefaced denial of the statement which I was compelled to make to my clinical class. I am induced to take the present step because I do not wish to make the lecture-room an arena for disputes. I am further induced to take this step, instead of inviting you to hear my reply in that theatre before a jury of my own pupils, because I should be apprehensive that your reception might not be quite cordial; and because the attachment and regard which they have uniformly manifested towards me would ill suit them for the office of jurors. Influenced by these motives, I prefer making the public the jury to try the present question, and your own publication the medium of communication.

I shall pass over, in silent contempt, all the low abuse and silly puerile calling of names, so worthy of a scientific journal, as they are evidently the first angry effusions of an evil spirit, which has received just castigation, but not profited by it.

I shall proceed to meet the charges: and, first, that “after a week’s preparation I am unable to speak intelligibly on disease and its treatment for the space of one hour.” For the truth of this statement I appeal to my audience, whom you rightly represent as “enlightened.” My reply to it is this: it is my custom to select the cases on the Friday, during my visit, and I often do not receive the notes of the cases from the pupils until the Saturday evening when I enter the theatre. That I am not afraid of pub-

lishing my remarks, when the subject is of sufficient importance to merit the attention of the public, the pages of the Medical Gazette, and of the Medical and Physical Journal, will amply attest. Did it not, however, strike you, who profess to be the lover of openness and fair dealing, in making this attack upon me for declining to have my extempore lectures published, that you were in duty bound to notice the conduct of Mr. Lawrence, who has withdrawn his written consent to have his lectures published, because they were not fit to meet the public eye? lectures forming a systematic course, embracing the whole of surgery; lectures which he has been years in compiling; which he delivered to his class in Aldersgate Street, and for which he received an ample remuneration. I shall only offer one more observation on this part of your paper: how did it happen that you only discovered the worthlessness of my lectures at the moment when you were refused permission to publish them? But for that refusal you would still have been too happy to have culled the fruits of my experience, to sustain your falling publication.

Your observations respecting the lectures not being gratuitous, are too absurd to merit a single word in reply.

You next state, that “it was a glaring piece of irony which was inserted in the Lancet of October 5th;” in which you say, “Mr. Earle, to his credit be it spoken, &c. &c.” Was it in irony, that in a former number, in your address to the new pupils arriving in London, you particularly recommended them to attend Mr. Lawrence’s lectures on the principles of surgery, and Mr. Earle’s clinical lectures? I have to regret much that your irony was so masked as to deceive my friends and the public, and to lead some to suppose that I had for a moment “listened to the voice of the charmer;” an imputation which cost me a sensation of real pain, which I never felt from all the abuse which ever fell from your pen.

You next state, in reply to my assertion, that you persecuted me most maliciously for years, with all the aspersions which falsehood and malignity could invent, “that the readers of the Lancet require no contradiction of this falsehood.” Allow me to refresh their memories, and to take one single instance from many. Let me refer them to No. 233, for Saturday, Feb. 16th, 1828,

page 722. They will there find your comments on a case of injury of the head, reported in the same number, at page 720. The case was briefly as follows: a patient was admitted with a severe injury of the head, which was very actively treated without success. Symptoms of pressure came on; such as paralysis of the bladder and rectum; loss of sensation of one side, with convulsive action of the muscles on the same side. The sloughy state of the wound in the scalp clearly pointed out the principal seat of the injury. Under these circumstances, it was determined, in a consultation with Mr. Vincent and Mr. Stanley, to give the patient the possible chance of recovery by the application of the trephine. At the moment when the operation was determined on, Mr. Lawrence entered the ward; and, after a few moments' observation, declared he could see no other indication except that the man would certainly die. As he would not condescend to enter into any further explanation, I did not consider it incumbent upon me to abandon my own opinion, sanctioned as it was by that of Mr. Vincent and Mr. Stanley. The operation was performed, and blood was found effused beneath the dura mater. The patient improved after the operation, and made an attempt to speak. He survived the operation 36 hours. On dissection, above *four ounces of blood* were found effused upon the brain. Here, then, was a case in which it was most apparent to any person of common sense that Mr. Lawrence had given a hasty and most erroneous opinion, as that gentleman could not see that there existed any symptoms of pressure, nor any other indication except that the man would die. Either from your own ignorance of practical surgery, or your unjustifiable belief in the ignorance of your readers, or from your hopes that they would only read your slanderous comment, without reference to the case itself, which contains so palpable a contradiction to your remarks, you select this case as a text for a most malicious and false attack upon my character. It is quite sufficient for you that Mr. Lawrence differed from me in opinion; and you extol that gentleman to the skies, and endeavour, proportionally, to degrade me in the opinion of your readers. I say *you* have done this; for you must know, although you dared to put the slander into the mouth of your

reporter, that the whole of it was a gratuitous fabrication of your own. Mr. Weekes, who was appointed house-surgeon by Mr. Lawrence, was the hired reporter at that time, with the sanction and approbation of Mr. Lawrence. Mr. Weekes admitted, before nearly all the medical staff of the hospital, the treasurer, and almoners, that he sent the report of the case as published at page 720, but most solemnly denied that he had uttered one syllable of the scandal which is put into his mouth, or in any way sanctioned the malicious observations contained in your comments; nay, more, Mr. Weekes declared that he had remonstrated with you for abusing his name, and uttering your slanders under the cloak of a reporter: to which your reply was, "that his conscience was too tender."

Your object in thus attempting to rob me of my reputation, needs no observation from me. This one instance will probably suffice to convince your readers of your malice and your falsehood; if they require more, I will refer them to my letter, in the second number of the Medical Gazette.

You next state, that you have not urged, directly or indirectly, that you were sensible you had injured me, and were willing to make reparation. Facts are obstinate things, and I might leave it to your readers to judge by your actions—by your gradually altered tone, and respectful mention of my name, whenever you have of late had occasion to refer to the cases under my care and the operations which I have performed. These I consider as substantial proofs of your wish to conciliate and make reparation; but I possess other proof in support of my assertions. My late neighbour, *your friend*, Mr. Fay, the dentist, repeatedly assured me that you entertained a respect for me, and threw out many insinuations against the principal actors behind the scenes. My reply to that gentleman was, "Sir, I do not ask you whether you are authorised to make this communication to me, but you are perfectly at liberty to tell the editor of the Lancet, that, if such be his real sentiments towards me, he is even more base than I imagined."—Dr. Armstrong, who was called to attend some branches of your family, also assured me *that you were quite satisfied with my public conduct*; for which, as in duty bound, I feel most truly grateful. Lastly, your own reporter, Mr. M'Cristie, about a

twelvemonth since, called on me, in consequence of my remonstrance with Mr. Lawrence for taking money from an acknowledged reporter, and, in conversation, informed me that you had declared to him that all your enmity towards me arose from a belief that I had been a contributor to a subscription raised for the purpose of crushing the *Lancet*; but that, in every other respect, you were perfectly satisfied with my conduct, and entertained a respect for me. Here, then, was a direct avowal of the *pure disinterested motives* which influenced you in reviewing the conduct of a man holding an important public office. The same gentleman, on being informed that I had never contributed one shilling either in favour of, or against the *Lancet*, intimated that he was sure that you would endeavour to make some reparation, and wished me to direct his attention to any cases I wished him to report. My reply was, "that I had never made the slightest objection to the fair and impartial publication of every act of mine, as surgeon of St. Bartholomew's; but that I never would, directly or indirectly, sanction a publication in which I had been so slandered." From that time I have been spoken of decently, have been called by my proper name, and have frequently been mentioned with commendation; and these I consider as substantial proofs of your desire to make reparation.

You next deny that you made application for the notes of my lectures. In my address to the students, I did not state that you had; but I have no hesitation, on the present occasion, in positively affirming that your reporter called upon me, a few days before my address to the pupils, and, after stating that my lectures were highly appreciated, requested me to furnish him with a copy of my notes. "*Qui facit per alterum, facit per se.*" It is true he never stated that he came directly from you, but I had a right to conclude that he did so with your knowledge; and had I furnished him with any manuscripts to place in your hands, I well know the use you would have made of them;—from that moment I should have become an humble tool in your hands, as others have, to their cost. With respect to your request that I would correct the proofs of my lectures, *I never asserted any thing of the kind.* My expression was, that

I was well aware, by correcting the press, &c. that I might gain a certain share of popularity; but this by no means implied that I had been required to do so.

And now, that I have answered your bold defiance, and given you my authorities, and that I have furnished you with proofs of your falsehood and malignity, it remains only for me to express the proud satisfaction which I experience, after so long discharging the arduous duties of surgeon to a large public institution, that my conduct, which has been open to all, has been censured only by a pamphlet whose character for truth is now pretty generally appreciated; and further, that I am now in a situation to be able fearlessly to encounter and expose a public slanderer, who has too long been permitted to send forth his falsehoods with impunity.

I send you this letter because you have pledged yourself to publish whatever I might urge in reply to your challenge, and I now call upon you to redeem your pledge. Fearing, however, that it might be imperfectly understood by your compositor, I have thought proper to send a copy of it to the Editor of the Gazette.

I am, Sir,

HENRY EARLE.

P.S.—There is one other point on which I omitted to make any observation in my letter sent last night. You state that "it is curious that my objections were not made until after the non-publication of my third lecture, and intimate that my vanity was wounded by the omission. At the moment when you penned this paragraph, *you must have known* that you did not possess the materials for publishing my third lecture; that your reporter had applied to me to furnish him with the notes, and was peremptorily refused. As you promise to publish, "without curtailment," all that I shall urge, I desire that this may be added as a postscript to the letter of

HENRY EARLE.

PROCEEDINGS OF SOCIETIES.

HUNTERIAN SOCIETY.

Nov. 4, 1829.

Cerebral Affections.

DR. WHITING related an interesting case of disease of the brain. The pa-

tient was a young lady, and the disease seemed to commence in the frontal sinuses. She had pain about these sinuses, and a bloody fluid was discharged from the nostrils. As the disease advanced, a sense of stunning occurred; on which a tendency to coma and a difficulty of expressing herself correctly supervened. The urgency of the symptoms fluctuated, but the disease terminated fatally.

Examination.—A quantity of pus was found in the anterior lobes of the cerebrum, above the frontal sinuses; but the dura mater did not appear to have given way. The larger quantity of this pus was on the left side. The inner table of the frontal bone was destroyed by caries, and there was a communication between the cavity of the cranium and the frontal sinuses. The dura mater was not adherent to the brain, but the convolutions of the anterior lobe of the left hemisphere were nearly obliterated. Within the substance of the left hemisphere there was a cyst, containing about four ounces of a sort of gelatinous fluid, not so opaque as pus. The cyst was so dense as to admit of being taken out, and no communication could be detected between it and the membranes. The membrane of the frontal sinuses appeared to have undergone thickening. The Doctor conceived that the cyst was an hydatid.

Various cases of head affection were mentioned by other members. Among others,

DR. BABINGTON mentioned a case of abscess within the substance of the brain, and a remarkable feature presented at the onset of the disease. The child was seized with a propensity to run round the room, and cried, "don't stop me; it is so funny!" He also adverted to the case of the lamented Dr. Wollaston, as elucidating the slowness of these diseases, as well as their insidiousness. The particulars have appeared in the Gazette.

MR. CALLAWAY had twice performed paracentesis capitis. In one child, two years and a half old, he operated repeatedly, and with relief; but the child died of measles. The second patient was younger, and died apparently from irritation.

HOSPITAL REPORTS.

HOTEL DIEU.

Encysted Hydrocele of the Spermatic Cord.

A BOY, twelve years of age, was operated upon at the Hôtel Dieu, for hydrocele of the left side, in 1828. He was treated by injection, and left the hospital perfectly cured. Some months afterwards, there appeared in the groin opposite the inguinal ring a small tumor, which was soft, indolent, fluctuating, and without any discoloration of the skin. This swelling seems to have been taken for hernia, for a bandage was recommended. Notwithstanding the use of this, however, the tumor continued to increase; in consequence of which the patient entered the hospital again last month.

A roundish, slightly elongated tumor, as large as a full-sized pigeon's egg, presented itself opposite the inguinal ring. It began about half an inch from this point, and terminated near the epididymus. Although pretty tense, it was fluctuating, and without any change in the appearance of the skin. No shock was communicated to the hand when placed on the swelling while the patient coughed. It could be made to return into the interior of the inguinal canal, but it was perceived to be insulated there. There was a manifest transparency in the tumor. These appearances led M. Dupuytren to regard it as an encysted hydrocele of the cord, and he proposed to treat it by incision.

The operation was performed Oct. 13. The boy was placed on his back, and an incision made into the skin covering the tumor. This incision was made with as much care as in a case of hernia, lest there had been any mistake in the diagnosis, and to avoid the risk of wounding any part of the spermatic cord. The subjacent layers were successively divided, and a jet of lemon-coloured serum announced the opening into the cyst. The opening was enlarged by means of a bistoury and scissors. The finger introduced into it could detect no communication; the serum it had contained was entirely evacuated, and the cavity was filled with charpie, to produce suppuration, and subsequent adhesion of the parietes of the cyst.

The charpie was removed in a few

days, and filled with fresh lint. A moderate degree of inflammation resulted, and to-day (Nov. 11) the wound is nearly cicatrized.—*La Clinique*.

Vesico-Vaginal Fistula.

The following case will be read with interest by those who have perused Mr. Earle's interesting lecture in our last number. A woman, about 30, was admitted into the Hôtel Dieu, during the winter of 1829, labouring under a communication between the bladder and vagina, the result of a long and difficult labour. She was treated by means of the actual cautery; and gained, first, some decided improvement; and, subsequently, obtained a complete cure. Scarcely had the urine entirely ceased to flow by the fistula, when she became impatient of delay, and left the hospital. For some time all went on well; till one day, having made a violent effort in her anxiety to get quickly into a carriage, the cicatrix gave way, and the opening was re-established; the urine flowed through it as before, and all the former evils were experienced.

The patient was examined in the first place, and the situation of the fistula perfectly recognized by the finger; it was in the neck of the bladder, and on the right side of the vagina. By means of a speculum its exact disposition was determined:—it proved to have a transverse direction, and to be formed of two lips, the upper of which extended downwards; and passing a little lower than the under one, thus could be made to close the fistula altogether, or nearly so. This explained the circumstance of the patient retaining the water in certain positions, while in others, as the recumbent, the discharge was involuntary; these conditions depending upon whether the upper lip was or was not applied over the orifice.

In this state of matters, M. Dupuytren resolved to have recourse to the same means which had relieved her before, viz. the cautery. For this purpose the following operation was performed Oct. 13. The patient was laid on her face across the bed, a pillow being placed under the abdomen, and the limbs hanging over the bed.

A speculum was introduced, so as to bring the fistula completely into view, when M. Dupuytren cauterized its edges lightly with an iron, shaped like a small

bean, and heated to whiteness. In the course of the day the patient was placed in a bath, to moderate the pain and inflammation which necessarily followed. From this time the urine ceased to flow by the fistula, the inflammatory tumefaction presenting a sufficient obstacle to it; and up to the present date there has been no return of the discharge by the vagina.—*Ibid.*

GUY'S HOSPITAL.

Compound Fracture — Amputation — Extreme Constitutional Irritation — Death.

JOHN GREENEL, æt. 17, admitted Oct. 10, 1829. This afternoon, when going down a ladder to the engine-room of a steam-packet, he fell, so as to involve his right leg in the gearing of the engine, and before it could be extricated, received several strokes from the engine-beam on his right leg and foot, which produced compound fracture of his tibia and fibula, comminuted, and extending into the joint; fracture of the internal and middle cuneiform bones; partial dislocation of the astragalus; and extensive laceration of the soft parts. There was also great contusion of the leg, knee, and lower third of the thigh.

At 5, P.M. Mr. Morgan performed amputation, removing the leg below the knee by the usual circular operation. On dividing the integuments of the back of the leg, there was a copious gush of previously extravasated blood; and on dividing the muscles, unusually violent spasm of the limb took place. In other respects the operation was not remarkable; two vessels were secured by ligature, the integuments brought together laterally, with the customary dressings, and the boy then put to bed, in a somewhat exhausted condition.

In half an hour copious hæmorrhage took place; the dressings were removed; a third ligature applied to a bleeding vessel, and the stump again dressed; after which, pressure by the hand of an assistant was constantly made on the stump, thereby checking hæmorrhage, and preventing spasmodic movement of the limb.

2d day.—In the night, constant oozing from the stump, but no large bleeding; pain in the limb, with slight spasm; no sleep; countenance anxious and very pallid; pulse 110, with a sharp stroke. Towards evening his excitement greatly increased; the spasms of the limb became so violent as to require some force to retain it on the pillow. Excepting in the limb itself, there are no symptoms of local disease.

Rx Opii grs. ij.

Calomel. grs. ij.—Ft. Pil. h. s. r.

3d day.—In the night he became delirious, spasms of the limb continuing; during the day, he is rational and more quiet, but complains of pain extending from the stump up the thigh, which is swollen. Skin hot and dry; pulse 140 to 150, sharp and irritable, but deficient in power; stomach disturbed by nausea; bowels not open since the accident.

Haustus purgans.

*Mist. Effervesc. cum Tinct. Hyoscyami
℥ xxx.—6ta q. h. s.*

Evening.—The high irritability, delirium, and spasm of last night, are returning; there is frequent twitching of the muscles of the upper extremities.

Calomel. grs. ij. Opii grs. ij. h. s. s.

4th day.—In the night, wildly delirious, disturbing the ward by his shouts, and making frequent attempts to get out of bed. He has almost constant nausea, with frequent vomiting of bilious matter. Bowels have been freely open. This morning he is less violent; pulse 120, sharp, with a slight increase of volume; thigh painful, and much swollen, with patches of discoloration, and veins turgid. On cutting away some of the dressings, a thin discoloured puriform fluid escapes. A bread poultice to envelop the stump and knee.

Rx Mist. Effervesc. ℥i.

Sp. Æth. Nitric. ℥i.

Tinct. Calumb. ℥i.

F. m. 6ta q. h. s.

Liquor Opii Sedativ. gtt. xxv.

Ex. Mist. Camph. h. s. s.

5th day.—Less spasm; pain continues, and extends up the thigh, chiefly in course of sciatic nerve; diarrhoea; nausea and vomiting; complaints of weakness, and sinking; countenance depressed; pulse 116, weaker. The stump was dressed to-day, and looks foul, sloughy, and dark coloured.—Continue the poultice.

Mist. Cret. ℥i.

Confect. Aromat. ℥i.

Liq. Opii. Sedat. ℥ xxv.

M.

6th day.—A more quiet night; less delirium; less spasm; pulse 124, weak; diarrhoea is subdued; vomiting continues; countenance pale and sunk.

Tinct. Hyoscyami gtt. xxx. Ex. Mist.

Camph.—4tis horis.

Opii grs. ij. c. Calomel. gr. iss.—O. n.

Cataplasm. Sinapis Scrob. cord.

7th.—His power is fast diminishing; features hollow; tongue dry, and rather brown; bowels confined; pain and tenderness general over abdomen and all the extremities.

Thigh more swollen, hot, and painful. The region of the inguinal glands especially inflamed and tender.

A common enema immediately, and evaporating lotion to the thigh.

8th day.—Sinking; pulse 130, very weak; great pain in all his limbs, increased on motion; stump unhealthy; no sign of a restorative action; it is dark, sloughy, and the discharge sanious.

Ammon. Subcarb. grs. v. Ex. Mist.

Camph.—4tis horis.

Brandy 4 oz. daily.

9th day.—No material change.

Brandy 6 oz. daily.

10th day.—Less pain; stomach quieted by the brandy.

11th day.—Pain and delirium returned violently last night, but have now subsided, leaving him, however, at the lowest point of exhaustion; pulse scarcely perceptible; skin cold and clammy; features sharpened; face deadly pale; but he thinks he is better.—Died at 12, P. M.

THE LATE MR. WADD.

A MEETING of personal friends of the late lamented William Wadd, Esq. took place at No. 10, Park-Place, St. James's, on Monday, the 2d of November, to consider the best mode of paying a just tribute of sympathy and regard for his memory,—when the following plan was suggested for disposing of a part of his property, and thereby preserving entire a very fine and well-known Collection* of Medical Portraits, consisting of nearly 600 Engravings, as a lasting monument of his taste and diligent research:—

It was resolved by the gentlemen present to dispose of this collection by means of shares, at five guineas each, to be decided by drawing, the number of which not to exceed 200. The money to be paid into the firm of Messrs. Herries, Farquhar, and Co. St. James's-Street, to the account of Messrs. Tegart and Nussey, appointed trustees by the meeting.

LITERARY INTELLIGENCE.

In the press, to be published in January, in 1 Vol. 4to.—The Nervous System, by Charles Bell, F.R.S. containing his Papers read before the Royal Society, with Engravings, and an Appendix of Cases and Consultations, illustrating the Doctrines advanced in the Text.

* The Biographical Catalogue of these prints was published, in 1824, under the title of "Nugæ Chirurgicæ," by Messrs. Longman and Co. Paternoster-Row, and Callow and Wilson, Princes-Street.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OR

Medicine and the Collateral Sciences.

SATURDAY, NOVEMBER 28, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE IX.

Treatment of Inflammation—Antimony—Mercury—Diet, &c.

LOCAL bleeding, gentlemen, may be employed with advantage in the treatment of inflammation when the urgent symptoms have been subdued by the general loss of blood; or it may be employed alone in cases of a less serious description. In taking away blood by cupping, or by the application of leeches, when we have a choice between them (for scarification, and the abstraction of blood by punctures, are applicable in only a few cases), cupping is to be preferred, as the more efficacious of the two; for we can succeed in getting blood more quickly, and with more certainty, by this method than the other. But there are several parts of the body to which the application of leeches is the more desirable. With regard to their number, I should say generally, and with reference to adults, that it is not worth while to apply less than ten or twelve, and these may be multiplied as the case requires.

You will not, I trust, misunderstand my observations respecting bleeding, as though I recommended that local bleeding should be adopted in all cases of inflammation: in some cases, both general and local bleeding must be practised; in others, local bleeding alone answers every purpose; and there are a few cases in which it is not necessary to take blood at all. You must consider the state of the affected part, and the probability there is that the continuance of the inflammation will produce effects which would disturb the functions of the part. You must also take into consideration the constitution, strength, and the like circumstances, relative to the

patient. When the object is to check inflammation suddenly, you will find it advantageous to adopt general bleeding in a free manner—to take a large quantity of blood, and even to repeat the depletion; but the most effectual way is to bleed largely at once, as the end is obtained with much less expense to the general system than by what might appear a milder use of the lancet. Indeed there is no comparison, if we look to the mere point of debility, as to the effect of continued high inflammation, and that occasioned by the loss of a considerable quantity of blood at once. You will see a patient much more weakened by inflammation going on, than if you cut it short by copious bleeding. It is by no means uncommon to see a patient, in an affection of the head with delirium,—on the subsequent day in full possession of all his powers, if he have been subjected to a full but single depletion; whilst, on the contrary, he would have long remained ill, and the fever continued, if small, though frequent, bleedings had been had recourse to.

There is no one circumstance or symptom which can be laid down as a criterion or index by which to determine the quantity of blood to be taken. Certainly the pulse will not afford it; for in inflammation this may be full, strong, and hard; or, on the other hand, we sometimes find it low and depressed, particularly in inflammatory affections of the head—sometimes small and contracted, but hard and wiry, as in inflammatory affections about the abdomen. As this, then, will not afford a certain criterion, you must look particularly to local symptoms—to the state of the part affected, and its functions; and when you find evidence of active inflammation, you must then freely employ the lancet. It has been said that the state of the blood, as to the buffy coat, may be deemed a criterion for the extent of bleeding; but sometimes this does not exist. I have had occasion to notice the whiteness of the tongue as a symptom indicating the loss of blood to be necessary. It may be well to look to this in cases of in-

flammation, and not to regard it merely in reference to the state of the stomach and intestinal canal alone, but as it respects the system at large.

It is not sufficient in the treatment of inflammation to diminish the quantity of the circulating fluids by the abstraction of blood; we must also make use of means to prevent the introduction of further supplies into the system, by the use of purgatives; and these are to be regulated according to the nature of the case. You employ purgatives first to empty the alimentary canal—to clear out the whole of its contents. For this purpose we give a full dose of Calomel, with extract of Colocynth, or Rhubarb, and follow this up with an aperient draught of infusion of Senna, with Epsom salts, or a dose of Castor oil. You in this way get rid of what was in the intestines, and which kept the bowels in a state of irritation. You then administer neutral salts in small doses, to keep up a continual discharge from the intestines and the mucous surface of the stomach. On some occasions a large—a very large quantity of watery discharge is produced from the alimentary canal; but this is not surprising when we come to consider the great extent of surface presented by the stomach and intestines. The quantity of fluid so evacuated is very considerable; yet you will find persons go on giving purgatives for a great length of time, and to a great extent, who, nevertheless, are afraid of taking away a few ounces of blood from the arm. I have seen *Elatezinum* so given as to produce, by measure, five or six quarts of watery evacuations! When given in such a way, we cannot doubt that they have as great an effect in lessening the quantity of the circulating fluids as the taking a few ounces of blood from the arm. We ought probably to regard the administration of purgatives not only as lessening the quantity of the circulating fluids, but also as promoting counter-irritation, and thus reducing the determination of blood towards the part affected.

In inflammation, the diet must be particularly attended to. It must consist of fluids, or of plain, diluent, mucilaginous, and acidulated drinks, such as plain water, toast and water, barley water, lemonade, or tea. This should constitute the diet of a patient labouring under an inflammation attended with general disturbance of the system. When the case is not so serious, something more solid may be used, as roasted apple, ripe fruit, and toasted bread.

Such are the circumstances to be attended to in the treatment of persons labouring under inflammation: loss of blood, purging, abstinence,—these are the three great means of reducing inflammation. But there are auxiliary aids. In the first place, reducing the increased heat of surface, a symptom which is very troublesome to the patient. We find

that if perspiration be promoted, the febrile symptoms become reduced, and hence attempts have been made to bring on perspiration by the use of such medicines as Nitre, Liq. Ammon. Acet., the alkaline salts, with citric acid, &c. and these are called *Refrigerants*, or cooling medicines, because they take away the heat of the body. But the most powerful medicine of this kind is Antimony, of which there are two preparations well known, as James's Powder, and the Tartarized antimony, or Emetic tartar. These are very powerful remedies, for the emetic tartar does not merely act upon the skin—it also, according to the dose, produces perspiration by exciting nausea, or sickness, and purging; thus it becomes a powerful agent in checking inflammation. If the tartarized antimony be given for the purpose of producing perspiration, a quarter of a grain every four hours will excite it, and keep up a state of nausea;—half a grain produces sickness. When it is thus given in sufficient doses, you will find the action of the venous and arterial system greatly reduced by it, and perhaps there is no better mode of doing this, particularly when its use has been preceded by the more powerful means of bleeding. The pulse is exceedingly reduced in number and force under the state of nausea: in fact, so reduced, that the patient is brought, as we say, almost to death's door. This is particularly seen in the case of persons who go on board ship: they are violently sick—what is called *sea-sickness*—they lose all power, and lie as if they were dead. In this way, then, emetic tartar acts, by directly checking inflammatory action. Of late, this medicine has been used in larger doses than we are accustomed to give it, more particularly by the Italian physicians, who have observed its powerful effects, and have classed it among the *contra-stimulant* or *antiphlogistic* medicines. *Contra-stimulant*, gentlemen, is a Latin phrase, which signifies that which is opposed to, or designed to check stimulus; and inflammation being the result of stimulus, it therefore means, that which reduces or lessens the cause of inflammation. *Antiphlogistic* is derived from the Greek, *φλογίζω*, to burn,—to inflame, and therefore means the same as the Latin, that which is opposed to or designed to check inflammation. This medicine, that is, emetic tartar, is made use of by the Italian physicians, not in grain or half-grain doses, but to the extent of a scruple to a drachm and a half, and they say it does not, in these quantities, cause either vomiting or purging, and though frequently the first dose does so, yet after this the stomach receives it without repugnance, and in many cases it reduces inflammation without producing any evacuation, either from the stomach or bowels. I have in many cases tried its effects in this way, by giving a grain and a half, repeated

every two hours, and after eight or ten doses I have increased it to two grains; and in these instances I have found its effects to be as above described. In many cases of inflammation, particularly of the chest, and in violent phrenitis, its exhibition in this way has saved the loss of blood to a very great extent.

Another remedy of very considerable power in the treatment of inflammation, though it operates in a very different manner, is *Mercury* in its different forms, especially *Calomel*. It has long been ascertained by general experience, that the exhibition of calomel, after direct depletion, has a favourable effect in checking the progress of inflammation, in expediting the recovery of the patient, and, in preventing those changes of structure which frequently result from inflammatory action. Thus, we may say, that after employing the lancet freely, and after the complete emptying of the alimentary canal, the administration of calomel in doses of from two to three or five grains, every six or eight hours, has had a much better effect than if the general plan had been pursued. Upon observation, you will find that it has the power of changing the nature of the actions, and thus expediting recovery. In this point of view, it will of course be found an interesting matter to inquire how this end is accomplished. In the exhibition of calomel in inflammation of the iris, we see how its effects are produced. The inflammation of the iris is accompanied by effusion of lymph upon its surface. We find that by the exhibition of calomel, more particularly when the mouth becomes affected, the lymph is quickly absorbed. When I speak of calomel, I of course speak of mercury in general. Here then is clear evidence that it is by arresting the formation of lymph, and promoting its absorption, that these effects are produced. But the effect of this remedy is not confined to that particular form of disease; I only mention it as affording a proof of its effects in causing absorption, and as rendering it probable that in other cases, particularly in affections of the larynx and trachea, where an adventitious layer of coagulated lymph is deposited, mercury effects its removal by this way. It is not improbable, then, that mercury has the power of arresting that morbid action of the capillary vessels, which produces a change in the structure of the parts, when inflammation is going on to any extent. This, however, is a point which lies open for future observation; the exhibition of the remedy has not been tried in a sufficient number of cases, nor its effects been followed up by pathological observation, so far as to enable us to determine its exact mode of action; still there is great reason to infer that the effects which I have just described may take place generally.

These means taken together constitute what is called the *antiphlogistic treatment*—that is, treatment on a plan calculated to counteract the inflammation: and, when we speak simply of the general management as to diet, we call it the *antiphlogistic regimen*.

Although it may be stated generally that local applications are of much less importance than general means, in the treatment of inflammation, yet they are often useful as auxiliaries, and in many instances produce a comfortable effect on the patient's feelings. The increased heat of the part has naturally led to the employment of cold. We find, indeed, that the application of cold to the human body has the power of arresting hæmorrhage from wounds, and the loss of blood from other causes, as well as of checking inflammation. In fact, if we choose to apply cold in a considerable degree, and for a great length of time, it not only reduces the vascular excitement, but destroys vitality altogether. Various applications have been made to the inflamed part, to reduce its heated temperature: these consist of lotions, or washes. They are used by taking soft linen folded together, dipping it into the fluid, then laying it on the part, and frequently renewing it. The effect of this application depends, not on the mere circumstance of applying cold, but upon its being applied in such a way that the fluid may be evaporated from the surface of the part. Evaporation is a very powerful mode of producing cold. Hence the liquids used are frequently called *evaporating lotions*. It is of importance that you should take care, when you use these liquids, that they are so employed as to admit of evaporation, and not as I have frequently seen them used, the affected part being placed under the bed-clothes, in a kind of warm-bath. When thus employed, it is not surprising that nothing is effected by the application. For the purpose of producing cold in this way, we used cold water, iced water, vinegar and water, rose water, and very often a solution of sugar of lead. This last has been a very favourite remedy in reducing inflammation, and has been supposed to produce its effects by some sedative quality which it possesses. Thus we continue to use Goulard wash, or the saturnine lotion, though we do not regard it as deriving its efficacy from this circumstance. Sometimes other things are added to increase the evaporation. Spirits of wine may be employed in conjunction with rose-water, in the proportion of two ounces to six. When we wish to reduce the temperature of the part still further, we apply ice to it, roughly powdered, and wrapped in a cloth, or put into a bladder. Such application is, of course, at a temperature of 32 degrees; and if this be kept on until it is melted, the effects are very striking, particularly when applied to the head, in cases of determination of blood to

that part. If we apply cold spring water in a bladder, and renew it, we shall find that the temperature of the head will soon be much reduced. Even when considerable excitement exists, the patient will begin to find the cold very uncomfortable, and wish it to be removed; in fact, it soon produces such pain that he cannot endure it longer. An aged patient requires warmth; and there are many instances where warm applications are found more beneficial, as well as more comfortable to the feelings of the patient, than cold ones, and we are of course accustomed to accommodate the remedies employed, as much as we can, to their feelings and wishes. For this purpose we use warm fomentations, as flannels dipped in warm water, sometimes in medicated water; these being laid upon the affected part, and renewed as required. When fomentations are applied to a considerable surface of the body, as the chest, and decoction of poppies or camomile flowers are employed, they may be put into a rough towel, and laid upon the part. They will thus produce warmth and general perspiration over the whole frame. There is no invariable rule which we can lay down for the choice of warm or cold applications; but we may say generally, that cold is best in superficial inflammation and in the incipient state; but when it is fully developed or seated under the surface, not in the skin, warm applications are best. For local applications, we find a greater variety of substances used than I have now mentioned, but I do not believe that any one of them acts in the way generally supposed. We know, indeed, that opium will operate through the cuticle, if rubbed in; but such a thing as an infusion of herbs in hot water is not capable of this.

When new diseases are produced, those which existed previously become diminished, or entirely disappear. If a person has a violent inflammation in the urethra, and the testicle become affected, the former disappears. If a child has an inflammation of the eye, and the ears break out into sores, the former gets well. It has been attempted to imitate this process of nature by producing an artificial or new disease, to lessen that which already existed. This is called *counter-irritation*, and sometimes *revulsion*. Counter-irritation means opposed to irritation—revulsion is from the Latin word *revello*, to draw away; it is thus used under the idea that the new disease draws away that which previously existed—the words, therefore, are of analogous meaning. This object is mostly attempted to be accomplished by blisters; but these are not the only means employed. It has lately been proposed, by Sir Anthony Carlisle, to produce it by dipping a piece of metal in water of a given temperature, and laying it on the part; and this we know will produce blisters as

effectually as if the application were made with Spanish flies. The liquor ammoniac will produce a blister equally as boiling water, and may be used to produce its effects instantaneously. In order that we may have a chance of reducing existing diseases by this means, it is necessary that the new irritation be more powerful than that already existing. In a case of active inflammation in its full development, which has not been checked, the disease cannot be stopped by blisters; they will only add to the irritation, and increase the patient's suffering. Blistering, then, is not to be employed while local irritation is at its height, but after depletion and the other means already described have mitigated the local disturbance, this will assist in its removal. Blisters are also applicable when we wish to recal inflammation to a part which it has quitted, to fix itself on another part more important; especially on some internal organ, as in cases of gout and rheumatism. It may be doubted how far this is beneficial where inflammation has passed from an external part to an internal one. It may be best to attack it vigorously in its new quarters.

The means specified as proper to be employed in cases of local inflammation, may be continued and repeated until the inflammation is removed, or a milder course may be adopted, according to the circumstances of the case, till the functions of the part are restored; and the patient may gradually be permitted to return to his ordinary avocations.

But it will be necessary still to pay attention to the bowels and diet. Mild opening medicines should be administered, and the diet should be light, and in small quantity. Patients place a considerable part of their delight in eating and drinking; and when they have been for some time deprived of this pleasure, they wish to get back to it, and recommence stuffing as soon as they can. They have a longing after the "flesh-pots;" and the medical man often seems to think the enjoyment of them to be as important as does the patient himself. But it is very important that this should not be allowed, as it frequently occasions tedious convalescence, and often causes relapses. Dr. Baillie has stated, that almost all relapses in cases of inflammation may be attributed to a premature return to the ordinary habits of eating and drinking. If you treat cases of acute inflammation according to the principles laid down, you will find that you get rid of the disturbance in the part, and that it returns to its natural state. If, however, it be treated more mildly—if persons are afraid of taking a little blood in cases of acute inflammation, it will frequently happen that after the active stage has been somewhat subdued, the disease will pass into a chronic form. This will not always prove

the case to have been badly treated, but it generally shews that the treatment has been neglected or improperly conducted.

In other instances inflammation has been chronic from the beginning; that is, marked by less active symptoms than in acute inflammation. Although chronic inflammation is not marked by the same violent symptoms, or active sympathetic disturbance in other parts, it is nevertheless the same in kind as acute inflammation, and must therefore be treated in the same manner. It is a degree of active inflammation modified in proportion as its effects are violent or moderate. Inasmuch as the symptoms are less violent, it is not so necessary to take blood; indeed, a great abstraction of blood is by no means requisite in cases of chronic inflammation. Still we see many instances of chronic inflammation where we must take blood from the arm; and in patients of plethoric constitution, or where the inflammation is seated in some important part, it will be necessary to do so, else it will not be brought to an end for some weeks, or even months. We must attend to the patient's particular habits, and other circumstances, to determine the quantity of blood that must be drawn.

Counter-irritation is very applicable in cases of chronic inflammation, and we employ more active modes of producing it than in cases of acute inflammation. A more considerable and permanent means of promoting this than the application of blisters, is by rubbing in an ointment, composed of emetic tartar finely powdered—one part of the tartar emetic and three parts of lard. Rubbing this in night and morning produces inflammation of the skin, with the development of large pustules, much resembling those of small-pox. Setons, issues, and moxa, are other modes of effecting counter-irritation.

The regulation of the digestive organs is of much consequence in the treatment of chronic inflammation. We must clear out the alimentary canal, and adopt such means as will keep up an active though not violent discharge from the bowels; that is, without producing purging. There are a great many medicines which have the effect of purging, but in different cases we must select those which are most applicable. In such cases as we speak of, the neutral salts, at short intervals, will suffice, as we do not want in chronic inflammations to reduce the powers, but merely to obviate that disturbance in the system which the retention of feces would occasion, and to prevent accumulation. There are substances which act particularly upon the large intestines, such as aloes and colocynth, which we call *Eccoprotics*, from *εκ* and *κωπος*, dung, or medicines which clear out the dung. These, in moderate doses every day, or every other day, are to be employed, and with them may be

combined mild mercurial medicines, for the purpose of altering the state of the secretion in the alimentary canal. We see that when the colour of the feces is unnatural, the exhibition of mercury, in small doses, alters it, through some effect upon the liver. Calomel or blue pill, with compound extract of colocynth, or extract of rhubarb, are useful. Calomel is one of the best remedies, in small quantity, for this purpose; and, therefore, it is the basis of a number of quack medicines, under the names of "stomach pills," "dinner pills," &c. which are nearly all composed of calomel in conjunction with aloes.

When the tongue is very foul and loaded, and the discharges from the bowels are dark and unnatural, it is frequently advantageous to give an emetic, or to administer antimonials, in small quantities, as a few grains of James's powder, with calomel or blue pill, at night, and infusion of senna, with salts, in the morning. We cannot altogether explain the advantage of combining them, but we find when they are combined together they produce beneficial effects of which they are not capable when given separately. Thus, then, we exhibit purgatives in various ways.

After clearing out the alimentary canal, it is expedient to administer mercury in the *alterative* form, that is, in small doses, continued for some time. Five grains of the blue pill, or of Plummer's pill, or a grain or two of calomel, may be administered at bedtime every second night, and some aperient medicine may be given in the morning. I have mentioned aloetics: and you may give the compound decoction of aloes in the middle of the day, or a little before dinner. In elderly, or debilitated persons, you should generally select warm purgative medicines: the *beaume de vie*, as it is called, is a very good one; and under such circumstances, the tincture of rhubarb, with tincture of senna, also forms a good purgative.

It is absolutely necessary, in the treatment of these cases, to attend to the diet of the patient; it is quite as essential to regulate that as to determine the surgical treatment. Indeed, if you content yourselves with prescribing the surgical means, and leave the patient to regulate his diet, he will do more harm by what he puts into his stomach than you can do good by the medicines you administer; in fact, you will be beaten. During the existence of such inflammation, fermented liquors are improper; and animal food should only be taken in small quantities, and at stated periods. Broths, bread and milk, and the various farinaceous articles, are such as should be taken; that is, what is between the low diet of fever, and the full diet of health. When the local excitement is completely stopped, and the general disturbance has ceased; when the tongue is clean, and when, in fact, the pa-

tient is well, he may return to his common diet, but not before.

In that class of affections called spontaneous, or which are said to come of themselves, when they occur in nervous persons, of sedentary habits, and who have lived in bad air, we must do something more than adopt these means for relieving them. The necessary remedies, however, gentlemen, I fear you will not find in the *pharmacopœia*; there are three things which do not belong to the *materia medica*, but which to such persons are of the greatest importance—residence in pure air, exercise of body, and tranquillity of mind.

LITHOTRITY.

To the Editor of the London Medical Gazette.

SIR,

AMONG the most useful of the improvements introduced by Baron Heurteloup in the operation of lithotritry, are the means he has adopted for insuring the favorable position of the patient, and fixing the instruments without the aid of an assistant, while their action is proceeding. I have translated the chapter of his unpublished work, in which he treats these two subjects in detail. The accompanying sketches, though slight, will, I hope, assist in making the description intelligible.

I have much pleasure in forwarding this chapter for insertion in your journal, as being entirely practical. I trust it will be of service to such of your readers as may wish to study the art Baron Heurteloup has come to England for the purpose of demonstrating.

I am, Sir,

Your obedient servant,

J. RUTHERFORD ALCOCK.

Westminster Hospital,
Nov. 21st, 1829.

On the Position of the Patient and Surgeon during the operation, and the manner of fixing the instrument during its action against the Stone.*

Now that we have a precise knowledge of the end proposed in the construction of each of the instruments destined to

* It must be remembered that this paper is a chapter of M. Heurteloup's work. This will explain the manner in which it commences, as I have thought it right to adhere closely to the text of the author.—J. R. A.

destroy calculi in the bladder, and that their structure, mechanism, and action, are understood, let us consider, before we apply them to patients, or, rather, before we think of manœuvring them, the position in which we ought to place our patient, and what are the means we should employ to fix and retain the instrument about to be used during its action on a stone.

In the same manner as I have materially altered the instruments employed in destroying calculi, in proportion as they presented different forms and sizes, so these variations in the stones will furnish us with new indications to be fulfilled in relation to the position to be given to the patient, and the mode in which the instrument is to be held.

We have seen that when the stone was of small volume, the action of the *perce-pierre* was sufficient; but when the size was increased, and too large to be broken by one or two perforations made by this instrument, it became necessary to have recourse to a system of excavation; but whether the system of perforation is sufficient, or whether we resort to that of excavation, we should of course adopt those means of destruction we think best adapted to the cure of the patient.

When the stone is small we ought to place the patient on a common bed, and employ the hand only in destroying it; or a bow, put in action by means of the *chevalet*. When the stone is voluminous, and requiring the action of the *evideur*, we should place our patient on a particular bed, and fix the instrument in a more convenient manner. The play of the *evideur*, which joins to the perforating action from before backwards, a lateral motion, requires great steadiness, in order that its action may be satisfactory. Thus the precautions taken would be in exact proportion to the difficulty of the operation.

We will begin, then, by considering the position of the patient previous to the commencement of an easy operation; that is to say, in a case where it is judged proper to operate with the *perce-pierre* put in action by means of the *chevalet* held by an assistant.

On the Position to be given to the Patient when operated on by the perce-pierre, supported by the chevalet, and held by an assistant.

When it is ascertained that a patient

is afflicted with a small stone, which can be easily crushed by the *perce-pierre*, it may be sufficient to place him on an ordinary bed, and employ a kind of vice for the purpose of holding the instrument, in some degree similar to the lathe employed by the watch-makers; and retained in a proper position by the hand of an assistant. We will now consider the best manner of making use of these means.

We should endeavour, as much as circumstances will allow, to place the patient on a hard bed, neither very low nor very high, in order that the surgeon during the manœuvres, and while he is turning the drill, should not be obliged to bend if the bed be low, nor by its being too high have the movement embarrassed and uneasy. The patient should be so placed on the bed as to have the left leg resting on the mattress, and the right supported on a chair; the pelvis would thus be brought to the edge of the bed. This part of the body must be raised by a moderately firm pillow. The body should lie flat, the head and shoulders only slightly elevated. Such is the position which ought to be given to the patient on a common bed. If we have a sofa without a back we might operate on it with sufficient facility. In that case the patient is desired to lie down easily and naturally: the pelvis is raised, and he is requested to keep his thighs separate, and his legs slightly flexed. The patient thus placed, so that his thighs and trunk join nearly in a right line, the surgeon may proceed with the operation*.

The operator may, in introducing his instrument, if the patient is lying on a

common bed, with one leg on a chair, as has been described, place himself immediately opposite. This is the most favorable position. If the patient, on the contrary, be placed on a sofa, so that his feet are both on the same level with his body, the surgeon ought to introduce his instrument from the side: this is a less favorable position. The instrument being introduced, if it was done while standing opposite the patient, the operator ought now to come to the right; if, on the contrary, he introduced it while standing at the right, he ought to remain in that position, to seize and break the stone, effecting the manœuvres which we shall indicate presently when we treat in detail of those which the *perce-pierre* requires.

As soon as the surgeon has succeeded in seizing the stone between the three branches of the *perce-pierre*, he should estimate, by the length of the stem of the perforator, if the stone be small enough to allow of its being crushed by the pressure of the head of the drill, with the movement that may be given to it by the hand. He ought to endeavour to do it; and if he does not succeed, this rotatory movement which he gives to the drill with his fingers, will serve as an experimental essay, shewing him that it will turn with facility when he wishes to rotate it with the assistance of the bow; but to employ the bow, he must complicate his apparatus by the instrument which we have called *chevalet*, and the construction of which we are now going to examine before explaining the manœuvre.

The Chevalet.

The *chevalet* is an instrument destined to effect the following purposes. 1st, that the *perce-pierre*, being charged with the stone, may be held by the hand of an assistant; 2d, that the operator may, by means of a bow, give a quick movement of rotation to the perforating

* When the *chevalet* is used, it is required that the pubes should project a little, and that the thighs be not bent upon the body; for the bow, to which we are obliged to give a position, making it at right angles with the axis of the body, cannot act, or at least very imperfectly. It is therefore necessary to pay strict attention to this precept—that the body and the thighs should, as nearly as possible, be in a straight line.

drill; 3d, that the drill, in proportion as it perforates, should be pressed upon the stone. Let us now see how these indications are fulfilled by means of the chevalet. We will first examine its construction.

Construction of the Chevalet.—It is composed of two pieces, which, combined, fulfil the object for which it was constructed. We call the first piece the support* (fig. 1); and the second the repoussoir (fig. 2); from the use to which each piece is destined. The support presents a curved part (A, fig. 1), and a straight piece (B). At the top of the curved portion is a square passage (C), which is destined to receive *with facility* that part of the instrument which is equally square and adapted to it, and which we have called l'armure†. The straight part of the support is exactly squared, from eight to ten inches in length, two lines and a half in thickness, and from six to seven in width. An oval ring is observed at that part where the straight and curved pieces unite (D); which is attached to it, and is intended to give the assistant the facility of firmly holding the instrument with the right hand, while the surgeon is effecting the perforation of the stone.

The repoussoir is rather more complicated, and presents two extremities—an inferior and a superior. At the inferior extremity there is a hole (A, fig. 2), which is destined to receive the straight part of the support, which passes through it easily. A screw is placed below, so as to fix at will the repoussoir on the support.

The superior part of the repoussoir presents a kind of tube (C), in which there is a spiral spring. In this tube there is a little steel pin (D), which is so adapted that the pushing it into the tube allows the spring to act; and as its action tends to push it out of the tube, it necessarily presses the central stem to which the drill head is attached, forward, as it gradually sinks into the stone. A screw (E) placed above the

repoussoir, fixes at will the steel pin, which has at the external extremity a hollow, for the purpose of receiving the stem of the perforator. A little catch exists in the superior part of the pin, in order that, when the screw is loosened, the pin may not escape from the tube, notwithstanding that it is sufficiently free to obey the impulsion which the spring will naturally give it. Such, then, are the two parts which compose the chevalet. Let us now see in what manner they ought to be used.

Mode of using the Chevalet.—We have described the operator as having seized the stone, and that, finding it necessary to perforate it, he is obliged to have recourse to the chevalet.

The assistant should have disposed it so that the "support" and "repoussoir" should be separated, and have pressed the steel pin upon the spring, and fixed it there with the screw for that purpose.

The stone being seized and fixed in the perce-pierre, the surgeon should hold his instrument in the left hand while he takes the support with the right, and adjusts it. Holding the instrument and the support in position with the right hand, he ought then to take the repoussoir with the left, and, in the relation to the support which we have already described, adjust the extremity of the stem of the perforator with the hollowed end of the pin, and free the screw which holds it; so that, obeying the impulsion given to it by the spring, it may force the perforator against the stone, keeping it in constant contact during the whole of the perforation.

This done, he assures himself once more that the drill turns easily; and confiding the instrument thus disposed in the chevalet to the hand of his assistant, he takes the bow in the right hand, near the handle, which he holds between the palm of the hand, the middle, ring, and fourth fingers, whilst he seizes the cord between the thumb and indicator, and places it over the pulley of the instrument. Grasping this pulley with his left hand, without allowing the cord to slip, he seizes the opposite extremity of the bow at about three inches from the hook; holding thus, with the left hand, the extremity of the arch of the bow and the cord, which he is careful to retain stretched, in order that it may not slip from the groove of the pulley, he leaves the handle of the bow which he held in his right hand,

* The support is evidently for the purpose of supporting or maintaining the instrument; while the chief use of the other piece, the repoussoir, is by its spring, to repel or push forward the drill upon the stone.—J. R. A.

† All M. Heurteloup's instruments have a steel piece, squared sufficiently strong to resist the pressure of the screw, and yet allow the instrument to be firmly supported. It is this steel cap or envelope, for the purpose of guarding the instruments, which are of silver, from too violent pressure, to which M. Heurteloup has given the name of armure.—J. R. A.

and takes hold of its end, and with this hand curves the blade, whilst the cord, seized between the indicator and thumb of the left hand, is brought upon the hooked extremity of the bow.

The blade is thus held until the surgeon has adjusted the loop which is at the end of the cord on the hook of the bow. The operator, in holding his bow with the left hand, which he keeps in position, seizes the handle with his right; thus his left hand grasps the mass formed by the instrument and the chevalet, at the place where these two parts of the apparatus join by means of the hole which is formed at the superior extremity of the curved portion of the support. The assistant thus holding the apparatus composed of the instrument and the chevalet, and the surgeon also grasping it with his right hand, holding with his left the handle of the bow, every thing is disposed for the perforation of the stone as soon as the rotatory movement shall be given to the drill.

The surgeon ought to commence the perforation of the stone by giving to the bow first a very gentle movement, in order that the drill may make its impression on the unequal surface of the stone; and this beginning once made, he may proceed with more vigour, avoiding of course any shock, as that would fatigue the patient. The arm alone which holds the bow should move; all the rest of the body should be without motion, and the sweep of the bow should be the full length of the cord.

As soon as the drill has pierced into the stone as much as the adaptation of the instrument will allow, the operator should dismount the bow and the pieces of the chevalet in the same order in which they were put together; to do which, the assistant should continue to hold the instrument. The surgeon then takes the extremity of the bow with his left hand, leaving hold of the handle which he held in his right, and seizes with it the extremity of the blade, which he curves, while with the left he grasps the cord and unfastens it with care*.

* During the whole of this time the operator should be particularly careful to keep the bow exactly at right angles with the axis of the pulley; for if he were to incline it before the cord was unfastened, the string would fly from the groove of the pulley, and give a shock to the instrument by the sudden rise of the end of the bow, which would be extremely painful to the patient. This ought to be borne in mind, not only in relieving the bow, but also in fixing it.

After this, the screw which holds the repoussoir fast upon the support is loosened. The repoussoir is taken away first, and the support follows.

This effected, he continues the appropriate efforts for seizing the fragments of the stone, if the stone has been broken by the previous perforation, or to retake the stone if it has only been perforated. If there only remain fragments, they may be broken by the pressure of the head of the drill; if the calculus be yet entire, though perforated, it will be again necessary to make use of the chevalet, and renew the series of manœuvres which the destructive process requires.

During the whole of this manœuvre, the assistant ought to place himself immediately in front of the patient; which he will find he can do with great facility, whether the patient be placed on a common bed, as we have described, or on a sofa without a back or ends. In this last case, the patient should be placed sufficiently near the end to allow the assistant to hold conveniently the chevalet, and without being in a constrained position. He ought to be particularly careful to keep the extremity of the instrument, which grasps the stone, in the middle of the water with which the bladder is injected, and avoid carrying it towards the inferior portion of the bladder; and especially not to allow it to be pulled towards the neck, for the branches of the instrument would thus be in contact with that part of the bladder, and the patient would experience a disagreeable and painful vibration.

He should also be particularly attentive to hold in readiness for the surgeon that part of the chevalet called the repoussoir; and each time the operator resigns this part to him, to draw back the steel pin upon the spring, and tighten the screw destined to maintain it in this situation; so that the surgeon has nothing further to do, when he has adjusted the extremity of this pin, than to loosen the screw which holds it back, in order that the spring may act upon it.

Such is the manner of effecting in the shortest way the combined movements of the operation of lithotritry, as far as regards the use of the chevalet.

It will easily be seen how possible it might be to obtain a great saving of time and of movements, by a better constructed apparatus, which should

abridge as much as possible the fatigue which the operator and patient must both experience during the whole of the time occupied by these manœuvres of the chevalet, which evidently possesses a *simplicity* somewhat complicated.

This means of destruction is the first which has been used. We are far from contending that it may not be usefully employed, but only in simple and easy cases, where the calculi may be crushed by the perce-pierre: to these the chevalet has been very usefully adapted. But if with the means now before us, we are enabled successfully to treat these cases, science still requires more, in proportion as the difficulties increase. The patient placed upon a common bed, and the instrument supported by means of the chevalet in the unsteady hand of an assistant, may suffice, it is true, when the stone can be broken up by the action of the perce-pierre, two or three times repeated; but when the stone is of larger size, and requires the more rapid and vigorous action of the evider, these means no longer suffice, and can only, if they are employed to stones of a certain size, purchase the cure of the patient, when such is the result, by a patience which nothing can disturb; in fine, by a slow operation, often repeated, and always painful.

As we have found the perce-pierre insufficient in cases where the stone was more than eight or ten lines in diameter, so have we also come to the conclusion that the position of the patient on a common bed, and the instrument put in action by means of the bow held in proper position by an assistant, is equally imperfect. We have thought more was required, and concluding that though in easy and simple cases, the surgeon could operate with success, notwithstanding the inconvenient position of the patient, and the necessity of operating in a constrained and bent posture, which renders the movements awkward and difficult,—in spite of the mobility of the instrument destined to break up the calculus, the action of which, in some cases, becomes pernicious to the organ, the operator ought in cases of greater difficulty, for the sake of his patient and of science, to have recourse to means more certain and perfect in their action. These were the considerations which induced us to construct the apparatus which we have

called *lit rectangle*, or rectangular bed, which is destined to enable both patient and surgeon to be in the most favourable position, and that the instrument, charged with the stone, should be immovable during its perforation.

We will now pass to the examination of this new apparatus, one which we always use, of whatever kind the operating instruments may be, perce-pierre or evider; because it offers greater chances for the operation being performed without pain, and also on account of the greater rapidity with which it can be done, from the more energetic action of the instruments on the stone, and the greater scope it gives to the manœuvres of the surgeon, by an easy, unembarrassed position.

Lit Rectangle.

I have called this apparatus a rectangular bed, because the pieces which form the principal part of it, when we look at it from the sides, present the figure of a right-angled triangle; and, in fact, this bed cannot be constructed to fulfil exactly all the indications which the operation for the stone demands, when performed in perfection, unless it presents laterally the figure of a right-angled triangle, which is here observed.

The “*lit rectangle*” is an apparatus on which the patient is submitted to the operation, with all the favourable chances for success which a comfortable position for the patient—a perfectly convenient one for the surgeon—and the complete immovability of the instrument during the operation—can afford; to which may be added, the promptitude with which the instrument, charged with the stone, may be put in action without requiring any assistant.

Such is the problem we wished to resolve in constructing the “*lit rectangle*.” Let us first explain the mechanism as far as it concerns the position of the patient.

Construction of the Lit Rectangle.—Three pieces of wood joined (A B C), form each of the two sides of this bed, representing two right-angled triangles. These two triangles are united in front, towards the right angle of the triangle, by a very strong transverse piece of wood, D D; the two shorter sides, A A, of each of the triangles, are joined to each other by two transverse pieces,

which form the bottom for the bed, and which are not seen in this figure: to support the two smallest sides of the triangle, C C, another cross piece is observed, E: the two great sides, B B, hold equally by another cross beam, G.

At the extremity of the pieces which form the long side of the triangles, two holes are to be seen, H, which are destined to receive the two extremities of a cross piece, I, which forms the superior part of a quadrilateral assemblage, K K, serving to sustain the posterior part of the bed, when it is desirable it should rest upon the angle formed by the shortest side, C, and the longest, B, as the figure represents it: if, on the contrary, we wish the bed to rest flat on the hypotenuse of the triangle, this quadrilateral piece, K K, being moveable, and capable of being folded beneath, permits the bed to be lowered. This folding of the quadrilateral piece is rendered easy by unfastening the bar, M, which also is moveable, and which is attached by means of a bolt to the middle of the transverse piece, G, which unites the two long sides of the triangle. It will be seen that when we unfasten the bar of the lower cross beam of the quadrilateral assemblage, K K, the two pieces fold one upon the other, and allow the bed to lie on the long side of the triangle, B: let us bear this in

mind, for we shall have to allude to it when we study the manœuvring of the "lit rectangle."

A small mattress is seen on the frame work, O P, the anterior part of which is placed flat, and the posterior portion, Q, is raised by a sort of wedge or desk of wood, R, which, by being made to move forward or backward, allows the inclination of the mattress to be adapted with ease to the bodies of the different patients. The line of inclination of this wedge should be *exactly parallel* to the long side of the triangle.

In the front of the frame, and below the cross piece, D D, which joins the two right angles of the triangle, two moveable pieces of wood may be observed, S S, so managed as to be lengthened or shortened as may be required, and which have attached at their extremities two slippers, U U. These two pieces are received through a passage formed for them, and secured at any point by screws.

At the anterior extremity of the pieces which form the middle sides of the triangles, a copper button may be observed, X, to which is attached by a button hole, a leather strap with a buckle at the end.

At the angle made by the pieces which form the long and middle sides of the triangles, two handles are observed, Z Z, by means of which the bed may be

lowered at will, so that it rests upon the great side of the triangle, or raised until it rests upon the angle formed by the short and long side.

This, then, is the manner in which the lit rectangle has been arranged: let us now place the patient upon it.

Of the Position of the Patient on the Rectangular Bed.

After having laid a napkin, N, on the front portion of the mattress, the patient is placed so that the nates rest on the anterior edge of the bed, and the head and shoulders are raised (by the inclined plane produced by the wedge-formed box, of which we have already spoken) and the feet placed in the slippers. The patient thus placed is in the position most favourable to the perfect performance of the operation, instead of his unsteady and inconvenient posture when on a common bed, supported by pillows and cushions. Thus, therefore, the advantages to be procured by the lit rectangle, with respect to position, must be certain and evident. We now come to the description of that part of the apparatus destined to fix the instrument, and to which we have given the name of "*Support fixé*," or fixed support, to distinguish it from the "*Support mobile*," or moveable support, with which we are already acquainted, as a part of the chevalet.

The Fixed Support.

This support is destined—1st. to hold the instrument charged with the stone with sufficient steadiness to maintain the extremity of the instrument in the centre of the fluid with which the bladder is filled; 2d. that by this steadiness the excavating instruments may be employed*; 3d. that the action of the perce-pierre may be rendered more energetic and prompt, at the same time that it is easier for the patient; and, 4th. that the surgeon may perform the operation without requiring an assistant.

Construction of the Fixed Support.—Nothing can be more simple than this contrivance: it is a curved flat bar of steel, which moves with great facility in the groove cut through the transverse

bar (DD), which is on the anterior part of the bed. This bar of steel (33) becomes fixed and immoveable by the turning of a screw, the handle to which (4) is placed at the right extremity of the cross-piece (DD). When the screw is unturned, the support becomes again free and drops, the head resting on the cross-piece (DD). At the extremity or head of this support is a groove, accurately filed (5), to receive that part of the instruments already described as the *armure*; a small screw placed in the side of this groove is adapted to press upon the armure of the instrument, which is thus immediately rendered immoveable.

Of the manoeuvres of the Lit Rectangle and Support Fixé.

The rectangular bed only requires to be altered in its position, or "manœuvred," under very rare circumstances—such as when a fragment of stone is placed below the neck of the bladder, in patients where this part is very deep, as in emaciated subjects, and escapes from the researches of the instrument, which cannot seize it without a strong plunging motion; and the seizure of a stone in this manner is extremely painful to the patient, besides that the manœuvres we are obliged to make with this view are often useless. The inconvenience resulting from this circumstance is obviated by considerably elevating the pelvis of the patient, so that the fragment may change its position from below the neck, and fall into the posterior part of the bladder. This elevation of the pelvis is effected by lowering the bed, so that it rests on the long side of the triangle. In this manner the position of the patient is gradually and gently changed; the pelvis is elevated, notwithstanding the body is on a horizontal plane; and a research, which might otherwise be troublesome, attended with pain, and unsuccessful, now becomes easy and favourable in its result. When the patient is thus lowered, it is necessary to take care that he does not slide, by passing a belt round the back of the neck, bringing it over the shoulders, and attaching it to the buckle which has been described when treating on the structure of the bed. This is all that relates to the manœuvring of the bed, and it will be seen that it is confined principally to those rare cases where the fragment is lodged below the

* A stone cannot be submitted to the action of the evident instruments without being thus steadily fixed.

neck of a deep bladder, and inaccessible to the branches of the instrument when the patient is in the ordinary horizontal position. It is sometimes desirable to raise the pelvis considerably, in order to seize a large stone: in this case the inclination of the bed would be useful, and tend to save the patient pain. We now pass to the manœuvre of the support fixed.

Compared to the long and repeated manœuvres of the chevalet, those of the support are very simple.

When the surgeon has introduced his instrument (which he may always do while placed conveniently in front of the patient), and seized the calculus, he carries the extremity of the instrument grasping the stone into the middle of the fluid contained in the bladder, holding his instrument in his right hand, and *without either raising or lowering it* he grasps the support with his left, and raises it to the level of the armure of the instrument, which will be thus received into the groove of the support, which is held in position by the left hand, while he turns the screw and fixes it with the right: to fix the instrument he has now only to screw the head of the support closely upon the armure. Thus, then, the raising the support to the level of the instrument, and turning the screw upon the armure, completes the whole manœuvre necessary to enable the surgeon to apply the bow.

Here are all the details necessary for the full comprehension of the means and adaptation we at present possess for conveniently placing the patient during the operation of lithotomy, and for fixing and supporting the instruments. I think, in constructing this bed and the fixed support, I have been fortunate enough to improve that part of the science; and that these means may be fully appreciated, we will cast a *coup d'œil* on the advantages they possess.

Instead of the unsteady and disadvantageous position in which the patient is placed on a common bed, he is, on the rectangular bed, in the position most desired: all his limbs are semiflexed, the pelvis slightly elevated—his feet fixed in the slippers find a sufficient and convenient support, the trunk rests on an inclined plane, the head is raised, the arms free, the thighs naturally separated, leave the generative organs perfectly free, and, in fine, the unembar-

rassed position of the patient allows the surgeon to make with ease all the necessary movements. The operator is in an upright position, or nearly so, quite free, and consequently not at all fatigued, and can employ all the tact, delicacy, and gentleness of which he is master, in his movements, confident in the perfectness of his apparatus. Thus supported, he can take advantage of all the resources that present themselves for the destruction of the stone.

But if the bed has incontestible advantages as regards the ease of the patient and surgeon, the fixed support gives a certainty and promptitude to the operation which we cannot attain by the chevalet kept in place by the hand of an assistant.

Before the chevalet is grasped by the hand of the assistant, which is always necessary when these means are employed—before the instrument charged with the stone can be adjusted in the groove of the chevalet—the piece which contains the spiral spring, and which must press upon the perforator, can be connected with the extremity of the stem of this perforator—before the screw of this piece is fixed, and that of the spring unturned—the assistant taken his place to hold the instrument, and the surgeon passed the string of the bow round the pulley—before all this can be done the operator who employs the bed has had time to go on five or six times, and to have performed the drilling without any assistance. The manœuvres with the chevalet are long and embarrassing—those of the bed are quick, easy, and consequently favourable for the patient. This has been established by numerous comparative experiments, made both on stones out of the bladder, and on patients by the operation of lithotomy.

OBSERVATIONS

ON

M. BROUSSAIS' PRACTICE.

To the Editor of the London Medical Gazette.

SIR,

If the following observations should be deemed by you worthy of a place in your respectable publication, I shall

feel obliged by their insertion in your forthcoming number.

I am, Sir,

Your constant reader,

J. AARON, M.R.C.S.

Birmingham, Oct. 28th, 1829.

One of your contemporaries has recently given a case of "Gastro-enterocephalitis, so called, attended with malignant symptoms, successfully treated by M. Broussais, translated from the 10th vol. of the *Annals of Physiological Medicine*, for the perusal of the *British Physician*," and said to be "every way worthy of his serious consideration;" being "a most violent form of fever, attended with alarming symptoms, finally overcome by means so simple, and apparently so inefficacious, as to astonish the active practitioner." As I prefer a discussion on facts to an useless dispute about words, I shall not stay to consider the propriety of the name given to the disease in question; neither shall I enter into an examination of the doctrines advocated by M. B., as I do not profess to know much about them. I shall therefore content myself with commenting on the mode of treatment pursued in this particular case.

The disease occurred in a young man of "plethoric, robust, and well-constituted habit of body," after he had been for some days suffering from "derangement of the digestive function, attended with violent head-ache, aggravated no doubt by his constant application to study," and appeared to be induced by his having taken a walk in bad weather, while in this very susceptible state. He returned to his lodgings in the evening affected with fever, and on the next day had the usual symptoms of synocha, except that "diarrhoea" was present. In this state he was very properly bled (the report does not say to what amount!), and quietude, abstinence, and unstimulating drinks, enjoined. On the next day, the 28th of February, the report is, "same state as yesterday, only the pulse is less tense, the head-ache less violent." If this means any thing, it means that there was very little difference in the state of the patient from the preceding day, yet the bleeding was not repeated! Next report, "March 1st.—The whole abdomen painful on pressure; flatulency; borborygmi, with frequent liquid stools;

pulse more frequent, not so full, but harder; head-ache more violent, &c. An abundant epistaxis supervened during the night, which sensibly relieved him. Ten leeches to the anus!! Emollient fomentations to the abdomen; gum-water. 2d.—The night was calmer than yesterday; a slight remission of the symptoms." No treatment mentioned! "3d.—Aggravation of the inflammatory symptoms." No wonder. "Alvine discharges less frequent; tension of the abdomen; delirium during the night." Again no treatment mentioned!! Why was he not now bled, and why were not cathartics and diaphoretics exhibited?

"4th.—M. B. is called. Redness of tongue more circumscribed; appetite for cold drinks; epigastrium tumefied, tense, hot, and very painful; stools suppressed; urine scanty and high-coloured; and delirium at times furious; subsultus tendinum; pulse quick, small, and corded. Fifteen leeches to the epigastrium, five to each temple, and refrigerant applications to the head"—all for the first time! "Gum water.

"5th.—Tongue dry, very red towards the point, covered with a fuliginous coat, and the patient scarcely able to extend it beyond the lips; breath fetid; hypogastrium now tense and painful; borborygmi; discharges of fetid gas per anum; dysury; continuance of delirium, with loquacity alternating with muttering; carphology; subsultus tendinum; eyes haggard; hallucination, stupor, continual efforts to uncover the extremities; pulse small and quick;" and the only relief to this picture of the almost unchecked progress of the disease is a "sensible diminution of the pain and tenderness of the epigastrium!!" The pain and tension of the hypogastrium evidently arose from the suppression of the alvine discharges, yet no purgatives were administered! but "six leeches to the hypogastrium!!"—I suppose to draw away "the accumulated feces and refrigerants" to the head!!

"6th.—A very copious epistaxis came on about four in the morning, preceded by heat and redness of the face; the hæmorrhage continued to flow during the day and following night!" Now if this was not a most decisive proof of the previous necessity of much more active venesection, "then

am I a soused gurnet;" yet if further evidence be required by any one, what follows is surely sufficient to carry conviction to the mind of the most sceptical. "In consequence of this (*i. e.* the epistaxis) the patient gradually became more rational and collected; the countenance resumed its expression; the pulse rose, became fuller, and less frequent; the tongue moister, and the hypogastrium more supple." "Emollient cataplasms to the abdomen; continuation of refrigerants to the head." Still no cathartics!!

"7th.—Patient sensibly better; the tongue is less red, and its sooty coating has disappeared; abdomen supple; urine sufficiently abundant, free, and no longer high-coloured. He has had a copious alvine evacuation, very fetid, and as black as ink (he had swallowed a great quantity of blood); pulse less frequent, and hard; thirst very great. The arrival of the patient's relatives afforded him gratification, &c. Small enemata of cold water to be repeated two or three times in the day." This is the first time, be it observed, that any direct measures calculated to free the bowels were had recourse to!! "Refrigerants to the head.

"8th.—Prostration of strength, somnolency, intense thirst, desire for cold drinks (he asked for a piece of ice); abdomen has again become painful and tense; no alvine discharges; urine abundant; pulse again 100. Refrigerants to the abdomen; cold enemata!!

"9th.—Same state as last evening: same prescription!!

"10th.—Dryness of the throat; tongue fuliginous; greater tension of the hypogastrium; bowels continue costive; frequent desire to pass urine; slight cough; transitory delirium; continual somnolency; eyes turned convulsively upwards; subsultus tendinum." Can all this be wondered at, under such nugatory treatment? "Six leeches to the hypogastrium; emollient cataplasms to the abdomen instead of the refrigerants!"

But I will not trespass on your pages, nor the patience of your readers, by a regular detail and examination of the progress of the case, which is given at great length. Suffice it to say, that after a succession of slight amendments and severe relapses, which continued till the 10th of April, the patient "gained sufficient strength to leave his chamber

in a month afterwards!!!" This will not be surprising when it is observed, that the same want of energy as I have already noticed characterised the treatment throughout. Yet this case is held up by the *Lancet* as an example for the imitation of British physicians. It requires, I imagine, very little discrimination to perceive that the patient, in this case, owed his recovery (protracted as it was) much more to the strength of his constitution, than to the remedies employed; and as little, to be convinced that the great protraction of the disease was mainly attributable to the nugatory and trifling nature of the measures pursued. Yet, says your contemporary, "could we have the courage to follow, *pari passu*, the founder of the physiological medicine, and rely on similar means in the treatment of our fatal forms of fever, there is reason to believe that we should less frequently have to deplore the inefficacy of our art, and perhaps never the hurtful tendencies of our remedies!!" With the most perfect acquiescence in the latter part of the sentence I conclude, referring your readers to the case itself, and leaving them to form their own conclusions from the remarks made upon it by your contemporary.

EXTIRPATION OF AN ENLARGED OVARY.

To the Editor of the London Medical Gazette.

No. 19, Market-Street, New York,
October 11, 1829.

SIR,

KNOWING the deep interest you feel in every thing relating to the profession, I take the earliest opportunity of notifying you an operation which I have lately performed in this city for the removal of an enlarged ovarium—an operation great in magnitude and important in its results.

The subject of this case was a young woman from Ireland, aged 20 years, of a good constitution, and who had enjoyed good health until within two years. From that time to the present she has been tapped for ascites seven times, and the whole amount of fluid discharged by the several operations amounted to sixteen gallons. I performed the opera-

tion for the sixth time in July last. After the discharge of water I found the abdomen remained distended by a large tumor, occupying all the umbilical region, and extending into the pelvis on the left side. From the history of the case, I considered it an enlargement of the ovary, and suggested the possibility of removing it by an operation. She readily consented to this, and became anxious for its performance. On the 14th of September, after another tapping, and drawing off two gallons of a gelatinous fluid, I commenced the operation, by making an incision through the parietes of the abdomen, in the course of the linea alba, commencing two inches above the umbilicus, and carrying it to the pubes. The cyst of the tumor was firmly adherent to the peritoneum, for at least three inches in extent around the umbilicus. These adhesions, by a careful dissection, were all removed. The tumor was then drawn from the cavity of the abdomen, and the dissection continued in separating it from the broad ligament; this being done, the wound was immediately closed by stitches, and dressed with adhesive plaister. The solid part of the tumor, which was about one-third, weighed three pounds and a half. I was assisted in the operation by Professor Mott, Dr. Alex. Vaché, and my brother, Dr. J. H. Rogers.

It is now twenty-eight days since the operation, the wound has entirely healed, and as yet she has not had one unpleasant symptom.

When the result of this case shall be determined beyond all probability of doubt, I shall report it in detail in one of our periodical publications. The disease for which this operation was performed is very prevalent in this country, and since my return from England in June last, I have been consulted in several cases; and should this case prove successful, the removal of these tumors from the abdomen will become a common operation.

With much respect,

I remain your humble servant,
DAVID L. ROGERS.

AUSCULTATION.

To the Editor of the London Medical Gazette.

SIR,
It occurred to me the other day to wit-

ness the excellence of Mr. Painter's invention for deaf persons. I was both pleased and astonished at the extreme delicacy of the instrument, and it struck me that it might be advantageously applied to stethoscopic purposes. I accordingly made trial of it first upon the respiration of a child, by placing the ivory funnel a little below the clavicle, and the other extremity to my ear. The distance at which I sat from the subject of the experiment was about six feet—that is, the whole length of the tube; and I was gratified to find the respiratory movements conveyed to my ear with a distinctness which I had never experienced with the most approved wooden stethoscopes. The motions of the heart also were communicated with equal precision. Similar trials were then made on the adult, and with results no less satisfactory. These facts convince me that the acoustic tube is a better sound-conducting medium than the stethoscopes in ordinary use; and, by reason of its pliancy, many of the inconveniences attaching to the use of the solid cylinder may be completely obviated. Some of your readers, I trust, will be induced to avail themselves of these hints, by the due prosecution of which, I flatter myself, Mons. Laennec's admirable method of investigating a class of very obscure and yet important disorders, may receive still farther improvement.—I am, Sir,

Yours, &c.

F. BAILEY, M.D.

Reading, Nov. 12, 1829.

P.S.—I should recommend the patentees, Messrs. Painter and Co., surgeons, Warren-Street, Camden Town, to make the stethoscope about half the length of the acoustic instrument.

THE MEMBRANA TYMPANI.

To the Editor of the London Medical Gazette.

Sloane-Street, Nov. 2, 1829.

SIR,

If the following be considered worthy a place in your pages, it is at your service. Your obedient servant,

E. BOWDEN.

It has been long observed, that in the act of attentive listening the mouth is partially opened, which is believed to increase the power of hearing, and faci-

litate the transmission of feeble sounds to the internal ear through the Eustachian tubes. I believe the alteration in the form of the external auditory passage, which is produced by the opening of the mouth, has been overlooked; but, if I mistake not, it is to this cause any increased facility of hearing by such act is to be attributed. By placing the finger in the ear, and opening the mouth, the change in the form of the auditory passage is immediately observed, by the withdrawal of the articulating process of the lower jaw from within its axis, and thus enabling the sonorous undulations to impinge more directly upon the membrana tympani.

REMOVAL OF THE ARM, SCAPULA, AND CLAVICLE.

To the Editor of the London Medical Gazette.

SIR,

IN the last number of the Gazette, I have read with much interest a detailed account of the partial excision of the scapula, by Mr. Luke, of the London Hospital, on account of medullary sarcoma having taken root on a portion of that bone, and which appears to have been performed successfully, and in a masterly manner, by that gentleman.

I do not know whether the case be published, but in 1808, whilst doing duty at Greenwich Hospital, a young sailor, about 21 years of age, presented himself for a pension on account of the total removal, by operation, of the arm, scapula, and clavicle, and I perfectly remember our sending the man to the College of Surgeons, or to some one of the London hospitals, to be there examined as to the successful result of this formidable operation. Gun-shot wound, I think, was the injury inflicted, and the operation was determined on and performed by Dr. Ralph Cuming, then surgeon to the Naval Hospital at Antigua. Should you deem this notice of the case worthy of record, I beg you may insert it in your valuable journal.

Your's,

A. COPLAND HUTCHISON.

Duchess-Street, Portland-Place,
23d Nov. 1829.

MR. BATTLE'S PREPARATIONS.

To the Editors of the London Medical Gazette.

Maldstone, Nov. 16, 1829.

GENTLEMEN,

I HAVE been much disgusted with the account you have given of some preparations of opium, sarsaparilla, bark, &c. by Mr. Battley, whom you compliment as a respectable *chemist*. Are not all his preparations secret ones, or what are denominated *nostra*? If so, is it not inconsistent with the leading promise in your prospectus, to give them publicity? *

Mr. Battley, for about two years, continued to give, quarterly, an account of his analyses of opium, in the Medico-Chirurgical Review, by Dr. James Johnson, in each of which he promised to give an account of the mode of making his "sedative liquor of opium;" but after amusing the readers of that work for nearly two years, with statements in which I could not discover any thing like chemistry, the communications either ceased on his part or the learned Editor declined to give insertion to such plausible quackery; the object of which was to keep up the humbug of his sedative liquor. Now, gentlemen, to the point. Does this nostrum possess any advantage over liquid laudanum? I have tried it in numerous cases, in all of which, its effects have been exactly the same as I have always witnessed from opium. I have ascertained also, from analysis, that it contains, or at least affords on decomposition, morphine and narcotine: if so, what advantage can it have over opium? The fact is, it is a simple solution of opium in a dilute solution of pure *potass*, similar to that recommended by a French chemist (whose name I do not recollect, about fifteen years ago. If this assertion be not correct, Mr. Battley will of course deny it, in which case I will give you such evidence as in my opinion will establish its truth. With respect to his other *nostra*—viz. his preparations of Peruvian bark, sarsaparilla, and aloes, they are made in the same manner, and are like all articles of this class—*impositions*.

T. L., *Chirurgus*.

* Our correspondent is mistaken in this statement: we cannot give publicity to that of which we are ourselves ignorant; neither have we any recollection of puffing Mr. Battley or his *nostra* in this Journal.—ED. GAZ.

THE PHYSICIAN AND THE APOTHECARY.

To the Editor of the London Medical Gazette.

SIR,

At a time when the rapid advance of knowledge is proverbial, and every portion of science is, in the language of ephemeral cant, hastening to perfection, we may, with some advantage, be tempted to consider the present condition of our own profession. A former letter presented to your notice an endeavour to describe the general character of a good physician, and to define, as far as possible, the bounds of legitimate ambition, and the fairest mode of becoming useful to the world, as well as easy and contented in ourselves; and we may now descend to a more particular inquiry, and discriminately examine those two grades of the profession known by the titles of the physician and the apothecary; viewing them only under their individual relations, and comparing, without invidiousness, the essential differences only of their attainments and reputation. The progress of universal inquiry almost precedes the ancient veneration for dignities and honours; and the means of easy access to the various sciences and arts almost establishes an equality of knowledge. As far back as the middle of the last century, the physician might discreetly exert a dictatorial authority over the obsequious apothecary.—“Zounds!” said Dr. Norris, with mistaken indignation, “am I not a physician? Shall an apothecary dispute my nostrums? *Pharmacopola componat, medicus solus prescribat!*” (See the humorous Narrative of Dr. Norris, &c. &c. Swift’s Works.) That period has long past: the physician may advise, but he can now no longer exclusively direct the treatment of the sick; and the apothecary, or, in the language of the present day, the “general practitioner,” may, if he be properly educated, evince an ostensible equality with the physician, notwithstanding there exists a visible cause of depression both in public estimation and individual disqualification, which must still keep him in subjection. In what this inferiority of education and esteem consists, the following reflections may, at least, serve to suggest.

After a puerile education, a boy is removed at an early period from school, and placed under the careful superintendence of a medical practitioner; in whose shop he is to learn the nature of drugs, the prescribing of remedies, and the art and “mystery” of compounding medicines. Five years diligently spent in such employments, and in acquiring, perhaps, some manual dexterity, are usually deemed sufficient to qualify him for becoming a student and a scholar; and the youthful aspirant proceeds from the narrow limits of his master’s house to enter on a wider scene of action, and to commence the studious investigation of a profound and extensive science. With a mind regulated, perhaps, in its moral duties, but unprepared to comprehend and retain the weighty productions of learning, the demonstrations of hidden nature, and the probable conjectures of philosophic research, he advances in his pursuit with a wandering and obscure perception, and accumulates a strange and ill-assorted knowledge. The treasures of polite literature have yet to unfold their charms to him, nor can he reasonably be expected to assume the just pretensions of a gentleman, since he has been hitherto proudly excluded from the well-conducted circles of society. If his mind be vicious, and his appetites inclined to depravity, the favourable opportunity, or temptation rather, of self-independence, during the interval of an hospital education, exposes the means of sensual indulgence; and unrestrained by the open caution of friends, or the silent voice of classic instruction, he loses the ingenuous blush of modesty, and forgets the attendant shame of irregular conduct and small derelictions of principle. Medical studies are familiarized with filth, and an intimate acquaintance with disease and death may at first debase, before it elevates and ennobles the understanding, and fits it the more kindly for the observation and treatment of maladies. Without the power of extricating himself from the errors of his situation, he exercises with difficulty, or abuses, the means of acquiring information, precipitately risks the chance of a successful examination, and presents himself to the world less extensively educated and refined than the intelligent physician, but with a larger share of particular learning than the formerly useful apothecary. Superficial acquire-

ments are evanescent, finally leaving the mind more bare and uncouth than in a state of unenlightened simplicity: like gilding, which but feebly imitates the lustre of gold, and, when tarnished, is seldom the brighter from a second polish. With the confidence, without the peculiar spirit, of a scholar, the progress of self-improvement is terminated at the commencement of practical duties; after few years of diffuse application, the rigour of a public examination is presumed to be sufficient for the future guidance of a professional career; and the want of early mental cultivation impresses the unfruitful diligence of youth, and eventually stamps the unproductive character of the man. But a long and useful season of life has been wasted in the low employments of a shop: instead of the tedious term of apprenticeship, the fair endowments of a liberal education would supply the advantages of intellectual capacity and vigour of judgment; although it is the times, and not the false ambition of a few, that calls upon the apothecary to quit the narrow sphere of an honest and respectable inferiority. Yet let it not be imagined that the humble office of a medical apprentice is despicable, or that his time is misspent in the compounding of remedies, it being obvious, that, in a degree exactly proportioned to publicity of character and height of reputation, every station of life is in itself creditable, unless we forget to be honest and cease to be industrious. But the term of apprenticeship is, at the present day, unprofitable, because the public examination demands of the candidates an increased quantity of information; and, as it would be an anomaly in the history of scholastic tuition to seek from the student more learning than the course and opportunities of his education have permitted him to acquire, it might be profitable to discover, if possible, in what manner that demand may be frustrated, or become banefully efficient. If every class of medical practitioners be admitted into the profession through the medium of the same studies, the ancient title of apothecary subsides into a mere nominal distinction; and the "general practitioner" may issue from the schools of medicine of an equal value with the physician, if he be called upon to undergo equal examinations, to discharge

equal duties, and to risk an equal share of reputation: since similarity of knowledge implies similarity of power. This, however, is only theoretically true. The apothecary was, perhaps, a character formerly more really reputable than he is at present; since he has found the necessity of becoming more skilful, he has advanced from his station without a proportionate increase of authority, and often substitutes an apparent for the real possession of knowledge; although, when he is thoroughly educated, he is a man scarcely inferior to the physician himself.

At this novel conclusion we may arrive by the easy course of daily experience; and we may, with appropriate pity or admiration, find opportunities of observing, at our leisure, the presumptuous demands of ignorance, or the tacit advance of modest sense. But the physician must be superior to the apothecary, so long as he maintains the powerful ascendant of a classical education; for it is a truth universally admitted, that the diligent perusal of elegant literature not only inspirits and adorns the thinking mind, but is the only accurate mode of preparing it for scientific research and dignified conduct. In the practice of a liberal profession, the uncultivated understanding is always weak and impertinent. Besides the particular use and tendency of careful study, the delights of literature are wider and more various. The productions of good writers (such, at least, was the opinion of Cicero) may contribute to rouse the early slumbers of the morning, to animate the activity of noon, and to charm with pleasing reflections the silent privacy of night; under their influence solitude may be cheered, social manners polished, and the tedium of idleness gratefully beguiled; virtue may be established, and the powers of comprehension chastened and enlarged. He who would superciliously reject this warm eulogy of literature, by so high an authority, may be pronounced at once void of taste and feeling, and ignorant of the sweet solace of reading and retirement. The intelligent reader will complacently recognize the opinion of the sage Imlac—that "knowledge is certainly one of the means of happiness, as is confessed by the natural desire of every mind to increase its ideas. I am, therefore, inclined to conclude, that, if nothing counteract the natural

consequence of learning, we grow more happy as our minds take a wider range."

Here, then, we may pause, and remark that the essential difference between the physician and the apothecary lies, not in an unequal means of obtaining professional information, but in the different endowments of mental capacity. Some few, singularly blessed with intuitive genius, have become learned almost without instruction; but a greater number of adventurers, depraved and lost by too fondly relying on the unwieldy powers of genius, without the lively influence of polished tuition. Now, it would seem, is the appointed time for the "general practitioner" to advance himself; the path is open to public favour—the means are available of independent authority. Let it be remembered, that the character of a man's mind, during a single point or period of action, is often the character of his whole life. However varied may be the changes of fortune, individual identity is never destroyed; for the same mind, during health, will always evince the same kind of vigour under every condition—modified, indeed, by external circumstances, as well as by advancing years. Few can control or divert the onward tenor of manhood. Intelligence and uprightness of conduct are the beautiful products of early instruction; which, like all other beneficial qualifications, may be increased by perseverance and fortified by habit, embellished with erudition and illumined by peculiar talent, rendered useful by application, and amiable by benevolence of disposition. But mental dissipation, or the incontrollable loss of youthful vigour, can never be recovered; and, at a time of life when the mind is beginning to expand, the wasteful expenditure of five years is irretrievable; since every error, however small or insignificant, whether it arise from voluntary delinquency or unhappy compulsion, must invariably be productive of erroneous consequences and vexatious disappointment. Let the young student, therefore, carefully search into the depths of truth, and avail himself of the knowledge which the wisdom of former ages has delivered to us in books. The idler, and the man of pleasure, may smile with listless satisfaction at the cumbrous learning of the pedant, and rejoice that they themselves may

be, if they choose, more aptly fitted, without study, for the active duties of society: but it is the discriminative mark of a perverted mind to argue against the use, from the unskilful application, of any good thing, and wilfully to disregard that extensive benefit which the temperate exercise of solid information always diffuses. The possession of elegant learning is not incompatible with the duties of a medical man; and he, indeed, is placed under a deep responsibility, who would be an attendant on the sick without accurate research, and a familiar adviser without a well-regulated understanding. "Liberal arts and decent manners best adorn, or imitate, the inestimable gifts of genius and virtue."

MEDICULUS.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tne à allonger ce que le lecteur se tue à abrégé."—D'ALEMBERT.

A Practical Treatise on Diseases of the Genitals of the Male; with a Preliminary Essay on the History, Nature, and General Treatment of Lues Venerea. By JOHN MADDOX TITLEY, M.D.

ALTHOUGH we possess some valuable monographs on individual diseases of the genital organs in the male, and an excellent comprehensive Treatise on Syphilis by Mr. Bacot, still the perusal of the publication before us has made us sensible that there was abundant room for a work which, embracing the various diseases of those parts, and giving to each its due share of notice and importance, should offer a correct, but succinct representation, of the present state of our knowledge as to their nature and treatment. Such, in our estimation, is the Treatise of Dr. Titley.

The work is divided into four parts—the first treating of *diseases of the penis*, the second of *diseases of the urethra*, the third of *diseases of the scrotum*, and the fourth of *diseases of the testicle, &c.* Under the head of diseases of the penis, we have—1. *diseases which originate from sexual intercourse*—the various forms of ulcer; 2. *buboes*; 3. *secondary venereal affections*—the various

Forms of eruption, iritis, and periostitis; 4. *diseases which may or may not originate from sexual intercourse*—as phimosis, paraphimosis, excoriation; and, 5. *diseases which do not originate from sexual intercourse*—as herpes, psoriasis, warts, tubercles, cancer, &c. Under diseases of the urethra, we have—1. *Gonorrhœa*—simple and venereal, chordee, gonorrhœal rheumatism, gonorrhœal ophthalmia, gleet; 2. *stricture of the urethra*—temporary and permanent, bleeding from the urethra, false passage, retention of urine from stricture, rupture of the urethra and extravasation of urine, fistulæ in perineo. Under diseases of the scrotum, we find *inflammation, suppuration, gangrene*—itching of the scrotum, chimney-sweepers' cancer, elephantiasis of the scrotum, &c. And under diseases of the testicle, &c. we have—chap. 1. *diseases of the tunics*, hydrocele, &c.; 2. *diseases of the spermatic cord*—circumcision, hydrocele of the cord; and, 3. *diseases of the testicle*—inflammation, fungus, hydatids, irritable testicle, neuralgia of the testicle, simple chronic enlargement, scrofulous enlargement, fungus hæmatodes, scirrhous, &c.

It is obviously impossible for us to attempt a detailed account of the manner in which the author has handled such a variety of subjects. We must be contented with stating generally, that it is marked by discrimination and judgment; that his descriptions of disease are correct, and the treatment recommended such as observation and experience have shewn to be the best. The style, too, has a character of vigour about it which does not allow the reader's attention to flag.

As a sample of the author's manner, we give one or two extracts:—

The Sloughing Ulcer.

“Although I have assigned a separate department to the consideration of sloughing ulcer, I wish distinctly to be understood that there is no particular kind of sore to which the term can be limited; but that every species of ulcer to which the genitals are liable, may, under certain circumstances, take on a gangrenous disposition. It is a knowledge of these circumstances which is essential to the successful treatment of cases, where, for the most part, extensive mutilation is to be dreaded.

“In considering the causes which are productive of gangrene of the penis, we must take a comprehensive view of the local and constitutional causes which lead to a similar result in other parts of the body. A fruitful source of mischief, and, indeed, I may justly say of misery, has arisen from the generally prevalent belief, that the sloughing of venereal ulcers is of a specific nature, and consequently that it is necessary to arrest it by a specific remedy. The first common principles of surgery have been forgotten under the delusive notion of contending with a specific disease. Hence has arisen the horrible practice of literally pouring in mercury in all cases where a venereal sore assumed a disposition to gangrene; it signified nothing whether the death of parts was the result of excessive or defective vascular action. Such was the treatment pursued at the principal hospitals in this metropolis, until within the last few years; and it is to be feared that this erroneous practice is still carried on by many who were pupils of these establishments, and who have not enjoyed the opportunity of witnessing the amended plan of treatment, which, it is consolatory to reflect, has been in most instances substituted.

“Ulcers of the genitals assume a sloughing disposition from local as well as general irritation, which gives rise to inflammation, and, ultimately, destruction of the parts. If we suppose the case of a healthy young man having a small sore on the penis, and at the same time using violent exercise on horseback, acute inflammation is set up in the diseased parts, and terminates in sloughing. Such then is gangrene, the result of excessive action, arising from local causes of irritation. On the other hand, a patient having a similar kind of ulcer may be excessively intemperate, so as to induce a feverish state of body, or he may be attacked with simple fever from common causes; the diseased part then partakes of the general increased vascular excitement, and, from local peculiarities, may go on to gangrene: this would be an instance of sloughing as the result of inflammation, arising from constitutional causes.

“The most dreadful cases of sloughing, however, are met with in a state of constitution diametrically opposed to that which I have just described. For

example, a man whose constitution is utterly enfeebled by intemperate habits, with whom there exists an absolute deficiency of vital power, both locally and generally, becomes infected with a venereal sore on the penis, which, in a man of healthy constitution, would readily yield to common means, but with him rapidly spreads, and the contiguous parts speedily become gangrenous. A similar condition of system may be engendered by a combination of circumstances operating upon a previously healthy habit; such as the profuse exhibition of mercury, and confinement in the crowded wards and tainted atmosphere of an hospital. It is scarcely necessary to say, that the two latter causes act upon a diseased habit with tenfold fury.

"After saying thus much of the pathology of sloughing venereal ulcers, it is unnecessary to enter into a minute detail of the requisite treatment, which here, as elsewhere, must be regulated by circumstances. I may briefly observe, that those cases which are obviously dependent upon increased vascular action, are most under control, as, by a judicious and early use of antiphlogistic means, it is in our power at once to arrest the progress of disease."

"Gonorrhæal Ophthalmia."

"It will not be considered irrelevant briefly to advert here to that most destructive form of ophthalmia which occasionally prevails during the progress of gonorrhœa, and which I believe to be in every instance produced by the direct application of the urethral discharge to the eye.

"The attack of this species of ophthalmia is generally very sudden: for the most part one eye only is affected, but occasionally the disease affects both, and there is then sometimes, though not generally, a diminution or suppression of the disease from the urethra. The seat of the disease, in the first instance, is in the membrana conjunctiva, which becomes red and swollen to a great degree, and with a rapidity which has no parallel in any other condition of this organ. The inflammation quickly extends to the cornea; a profuse purulent discharge takes place from within both the upper and lower palpebræ; the vessels of the transparent cornea become injected with red blood, and complete chemosis often ensues in forty-

eight hours, or even less. The rapidity with which the conjunctiva becomes engorged is sometimes truly astonishing, everting both the lids; and the discharge is profuse beyond what could be conceived, either from the space which affords it, or the time in which the disease runs its course. The pain attending it is extreme, and the symptoms of constitutional disturbance very severe. The inflammation extends into the interior of the eye, producing a sudden effusion of lymph into the anterior chamber, and ultimately ulceration or rupture of the cornea, and consequent destruction of the eye.

"It is obvious that in the treatment of these cases—where disease runs its course with such frightful rapidity—we must be proportionally active in our remedial means. Large blood-lettings, repeated according to circumstances, and the exhibition of tartrate of antimony, so as to induce and keep up nausea and faintness, are two of the most powerful agents in subduing inflammation. But my experience in the treatment of this disease leads me to prefer the exhibition of calomel in conjunction with the antimony; as, for instance, if we suppose an extreme case in which blood has been quickly abstracted to the amount of thirty, and I have sometimes bled even to forty ounces, I then commence with two grains of calomel and a quarter or a sixth of a grain of tartrate of antimony every hour or two.

"The pre-eminent value of calomel in arresting acute inflammation of *serous* membranes is so well known, and the remedy so generally had recourse to, that it would be superfluous to say any thing on that point; but I have always been of opinion that the importance of calomel in arresting acute inflammation of *mucous* membranes has not been sufficiently acted upon. If I should not be considered as entirely deviating from my subject, I would specially notice the utility of mercury in cases of acute inflammation of the lining membrane of the larynx, trachea, and bronchi.

"It must, however, be confessed, that in a great majority of cases, although from the beginning the disease may be treated in the most prompt and energetic manner, yet the means will prove insufficient.

"From a conviction of the insufficiency of the antiphlogistic treatment,

though pushed to the utmost extreme, in subduing this species of ophthalmia, a practice diametrically reverse in its nature has recently been adopted by several army surgeons. It consists in dropping into the eye a strong solution of nitrate of silver; ten, fifteen, or twenty grains to an ounce of distilled water. This practice is had recourse to in the commencement of the severest form of conjunctival ophthalmia; and it is said, that so far from producing, as might be supposed, any increase of pain, it is attended with the most decided advantages; the pain and redness of the membrane being overcome almost immediately, and the cure effected, even without the abstraction of blood. The testimonies in favour of this practice in conjunctival inflammation are, I must acknowledge, so satisfactory, that I should not hesitate to adopt it in gonorrhœal ophthalmia.

"There is a kind of chronic ophthalmia which occurs in conjunction with the rheumatic pains and swellings of the joints already described as occasionally taking place in the progress of gonorrhœa. This affection is very different from the formidable disease which I have just described. It appears that the conjunctiva, in common with the other mucous membranes of the body, is in a disordered condition; and it is worthy of remark, that in some instances this ophthalmic affection alternates with the pains in the limbs."

"Fungus of the Testicle."

"This disease is by no means of rare occurrence. Sometimes phlegmonous inflammation of the testicle terminates in a small abscess, which bursts, and from the ulcerated opening the fungus gradually protrudes. In other cases, a painful swelling of the testicle, particularly characterized by its hardness, is the first symptom of the disease. After an uncertain period of time, the integuments, growing gradually thinner, ulcerate; and after a slight discharge of matter, a firm and generally insensible fungus protrudes; the surrounding integuments are much thickened and indurated, so that there appears a considerable mass of disease; the pain abates, and the swelling subsides considerably after the integuments have given way. In this state the disorder appears very indolent; but if the fungus be destroyed by any means, the integuments come together, and a cicatrix is formed.

"The fungus has its origin in the glandular substance of the testis itself, the coats of which are destroyed to a certain extent, and a protrusion of the tubuli seminiferi takes place through the aperture. Sometimes, however, a fungous growth arises only from the tunica albuginea, the testicle itself being sound.

"In many instances the disease seems to be caused or accompanied by a morbid condition of the lining membrane of the urethra.

"The state of the testicle will serve to distinguish this disease from those fungi of a malignant character which frequently are situated on this part, and usually are the result of cancer or fungus hæmatodes of this organ, and wherein early extirpation is the only treatment which offers a chance of relief.

"It is to be remembered, in the treatment of this affection, that the fungus has no character of malignity attached to it, and consequently castration is never requisite, as regards the disease simply. With a view of bringing the case to a speedy termination, when the structure is so far destroyed that the discerning powers of the organ are lost, we may recommend complete extirpation; but in a majority of cases, by early attention, a milder treatment will suffice.

"When the disease has clearly originated in consequence of irritation communicated to the testicle by a morbid state of the urethra, the swelling will frequently subside, the fungus shrink, and a complete cure will be effected, on the removal of the cause by the means recommended in treating of disorders of the urinary passage. It is probable, indeed, that in other cases a cure might be accomplished by the unaided efforts of nature; the disease, however, is of so indolent a character that a spontaneous cure would prove a tedious process.

"The fungus may be removed with the knife, by ligature, or by escharotics; and likewise it may be got rid of by absorption under the use of pressure constantly applied. If the projection be large, it is perhaps the best practice to cut off the fungus, and having pared the hardened edges of the integuments, to bring them as closely in apposition as possible. The treatment by ligature is tedious. Of the escharotic applications, the nitrate of silver is preferable; it should be applied freely, dry lint should then be put over the part, and firm pressure made use of by the appli-

cation of adhesive plaister. Under the conjoined influence of the caustic, which effects the removal of the outer and less sensible part by sloughing, and the process of absorption excited by the pressure, the disease is more quickly removed than if either of the means were used singly. I have witnessed the application of a solution of arsenic in two instances: in one case very unpleasant symptoms arose from the absorption of this active poison, and in the other case there was less decided advantage than results from the lunar caustic, although no untoward constitutional derangement was produced.

"If after the removal of a fungus, the remaining portion of the testicle continue indurated and enlarged, it is advisable to have recourse to mercurial frictions, under the use of which, absorption of the interstitial deposit will take place."

The account of elephantiasis of the scrotum is particularly full, the author having had repeated opportunities of observing the disease in the West Indies, and where he operated on six patients by the removal of the diseased mass, all of whom recovered.

We may mention, that in the preliminary essay the author has endeavoured to shew "that no type of lues venerea now known can be proved or justly presumed to have been unknown in the earliest ages; historical evidence is against such a decision; and no symptomatic criterion between modern syphilis and various other venereal affections (followed by secondary symptoms) now known and included in the new plague of 1494—1496, has yet been demonstrated. And having moreover shown that mercury is in no sense a specific for any venereal disease, I maintain further, that lues is not a specific disease, inasmuch as its probable cause cannot be separated by any sure distinction from the cause of those affections described under the denomination of pseudo-syphilis, and which have been believed to be produced independent of sexual intercourse."

As the prostate is decidedly more a part of the genital than any other system, we are at a loss to account for its entire omission by our author; and when his work comes to a second edition, (which will probably be at no distant period,) we would recommend to him to supply this deficiency.

MEDICAL GAZETTE.

Saturday, Nov. 28, 1829.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

REGULATIONS OF THE COLLEGE OF SURGEONS.

THE new code of regulations which has recently been issued by the Council of the London College of Surgeons, must be looked upon by every unprejudiced person as an improvement on those which they are intended to supersede. One of the most important changes relates to the attendance on provincial hospitals; a point, to the impolicy and injustice of which, as it stood in the late regulations, we have repeatedly directed attention.

On the last occasion of our adverting to the subject, we remarked, "the admission of some of the provincial towns to more equal terms is a demand so obviously just that we have no hesitation in saying, not only that they (the Council) ought to concede it, but that they must do so." A concession has accordingly been made. Four years' attendance on a provincial hospital was formerly required as equivalent to six months' corresponding attendance in London, Dublin, Edinburgh, Glasgow, or Aberdeen; whereas now the pupil is required to have attended only one year. But still a bone of contention is left, for with regard to the remaining six months, no period is admitted as an equivalent. As to the propriety of this regulation, there will probably be much difference of opinion; and as Uncle Toby very sagaciously remarks, "much may be said on both sides of the question." For ourselves we have no hesitation in stating that we regard the regulation as calculated to secure to the student better opportunities of learning his profession than he

would be likely otherwise to obtain ; and therefore it is fair to presume that the stock of knowledge which he lays in will be more extensive than if no such provision existed. Now if this be the test by which the measure is to be tried, we think there can be no doubt of its expediency. Neither have we any hesitation in affirming that the pupil who passes the first years of his professional studies in a provincial town, and comes to London with his mind already cultivated and prepared to receive every addition with avidity, will become a more accomplished surgeon than one whose education has begun and ended either in a provincial town or in the metropolis. One advantage, of no inconsiderable value, thus secured to him, will be that of attending the practice of two different hospitals. Any man who has seen much of our profession must have observed how apt the student is to pin his faith to the dicta of his teacher, adopting not only his opinions, but often his prejudices with them. If he settles in life at once, without an opportunity of witnessing the practice of others, his views remain permanently limited ; he sees only through the medium to which he has been accustomed ; or if he acquires a habit of seeing and thinking for himself, it is after a much longer period, and much more extensive experience. But if he attends in early life the practice and lectures of competent persons at different schools, he soon feels the necessity of judging for himself, and acquires a habit of referring to the book of nature as the only unerring authority by which the value of conflicting opinions can be duly estimated.

Were it left for the student to pursue what course his fancy might suggest ; were he told to acquire knowledge when and where he chose, without any defined curriculum, the standard of education would necessarily be lowered, and the door opened wide to the admission of a

crowd of persons from the lower classes of the community, who would be tempted, by the increased facilities and diminished expense, to enter a profession already over stocked. Every operative in Manchester would endeavour to make his son a *doctor* and a *gentleman*, till, in a few years, the unfortunate youth would envy the mechanical occupation of his father, and think that a village over-stocked with surgeons was worse than a market glutted with silks.

The outcry of the *levellers* (who, by the way, are now reduced to a few disappointed individuals, "the cankers of a calm world and a long peace,") is, that the meritorious part of the profession are starving ; and yet, with the same breath, they vociferate, down with all barriers—let merit be the only test—if merit met with its reward we should not be without practice, and our great champion would be at the head of his profession, instead of being restricted for a fortnight to a single patient—"a decent woman, lodging in Avery-Row." That distress does prevail in our profession, as well as in most other departments of the community, we cannot doubt. But while we admit this fact, and would willingly, in any reasonable manner, make our Journal instrumental to the relief of our suffering brethren, we must at the same time express our strong conviction that, in the great majority of cases, entire failure in practice is dependent upon incapacity or imprudence on the part of the individual ; and that they who now hunger after bread, are chiefly those persons who, in early life, never thirsted after knowledge. But from whatever cause the evil may arise, is it not a monstrous absurdity, with the fact of the profession being already too much crowded staring us in the face, to demand such changes in the system of education as would immediatel

render admission into it more easy, and success, when admitted, more difficult? In our opinion it ought, with all the corporate bodies, to be a fundamental principle to raise, rather than to depress, the standard of education; and every fair and rational means to accomplish the former object shall receive what assistance our humble support can afford it.

But to return. There is one rather amusing contradiction in the present regulations of the College of Surgeons, as to the period of study required; and which, if not a mere oversight, would seem to evince the very Quixotism of disinterestedness, instead of that abandoned devotion to Mammon which we are weekly assured the members of the council unanimously betray. It is, that candidates are required to bring proof "of having been engaged six years in the acquisition of professional knowledge." And again—

"Members and licentiates in surgery, of any legally constituted College of Surgeons in the united kingdom, and graduates in surgery of any university requiring residence to obtain degrees, will be admitted for examination on producing their diploma, license, or degree."

Now, as in other places four years is the minimum duration of study required, it is quite clear that the shortest route to Lincoln's-Inn Fields is by the way of Dublin, Glasgow, or Edinburgh. By this arrangement, too, the student, in his curriculum, need not so much as come within sight of any of those "human slaughterhouses," the London Hospitals, or any of the "Vampires" who live upon the blood of the patients. We marvel that our ingenuous contemporary has not expatiated on the great advantages to which this must give rise.

The greatest defects, however, in our opinion, as to these new regulations, are, first, that no order of succession in which the different branches of study

shall be followed, is enjoined; and, secondly, that the period of hospital attendance is so short. With regard to the former, it is indeed "recommended" that candidates shall have studied anatomy by attendance on lectures, and by dissections, during one season prior to attending the practice of an hospital: but of what use is it to "recommend," when the neglect of the recommendation carries with it no forfeit? If the advice be proper (which unquestionably it is), then ought it to have been made imperative, and not left optional. Anatomy, as we have elsewhere stated, is the very elements of surgery; and it is as necessary that a pupil should be master of it before he enters upon the study of surgery by lectures or hospital attendance, as that a boy should learn the Latin grammar before he attempts to construe. If, as many do, the pupil enter to his anatomy and hospital at the same time, such arrangement is injurious to both pursuits, and ruinous to the latter. He dissects till the latest moment—arrives at the hospital, perhaps, when the surgeon is already come, and contents himself with forming part of his "tail" for an hour, or perhaps but half that time; then hurries back to the anatomical lecture. And this leads us to remark, that the hours selected for teaching the different branches of medicine in London, are essentially bad. It would be much better that all the anatomical business should be completed before visiting the hospital. Full time should then be given for this; say from 12 to 2, or from 1 to 3, after which should come the lectures on disease, whether medical or surgical, while the mind of the student is fresh from its contemplation. Thus would the objects presented to him follow each other in natural succession, without that loss of time and jumble of ideas which result from the present system. According to the ex-

isting arrangements, the student probably opens the day with dissecting a little; but scarcely has he well begun when he is obliged to leave off, that he may attend his lectures on *materia medica* and the practice of medicine—his mind yet occupied with the *subject* he has just left. The lecture being ended, back he goes to dissect or to demonstration; after which he hurries to the hospital—returns to his anatomy—and has his surgery in the evening. A certain degree of variety is necessary to keep up attention, but changes so numerous and rapid as these cannot fail to confuse, and the alternation of ideas in the pupil's mind, could it be shewn on paper, would present the departments of science as arbitrarily, but not so distinctly depicted, as the intellectual organs in one of Mr. Deville's casts, or "the provinces in a map of revolutionary France."

SENTENCE IN THE CASE OF CLAPHAM.

THE sentence of the law has been pronounced against John Clapham, the unfortunate and misguided youth whom Wakley brought forward as a witness against Mr. B. Cooper. He has been condemned to six months' imprisonment in the common gaol. This is one of the fruits of that system of deception practised upon the young and inexperienced, by which they are led to the belief, that the various Corporate Institutions of this country are illegal; because it suits the interested purpose of a flagitious journalist to call them so. This belief once adopted, the next step is easy. "If they be not lawful," say these sophists, "it cannot be unlawful to overreach them;" and thus do they commit those misdemeanors which are visited with such serious and disgraceful punishment—punishment which not only interferes with a young man's prospects for the time, but which

fixes a brand of infamy upon his brow which can never be effaced. We are the more anxious to insist upon this point, because we know that a large number of cases have lately occurred, in which attempts have been made to practise various deceptions upon the Society of Apothecaries. We beseech those who would avoid getting into trouble, if actuated by no better motive—to take warning by the case we now record.

"Mr. Justice BAYLEY, after the Judges had conferred together for a few minutes, addressed the defendant, and said that no man with proper feelings of morality, or proper feelings of integrity, could fail to shrink from the means which the defendant had adopted to procure his license from the Apothecaries' Company. The question was not one of fitness or unfitness in any particular individual to practise as an apothecary. The legislature had determined that no man should practise unless he had passed a regular examination before the Court of Examiners of the Apothecaries' Company, and that that Company should not be at liberty to grant a license to any person who should be under the age of 21 years. It had been represented by the affidavits that the defendant's father bore a most unexceptionable character, and that the character of the defendant himself, with this single exception, was also unimpeachable; but this was a most momentous exception; for no man of right feelings would ever have ventured to do that which the defendant had done. The sentence of the court was, that he be imprisoned in the gaol at Huntingdon for the county of Huntingdon, for the space of six calendar months, and in the meantime be committed to the custody of the Marshal of the Marshalsea."—*Times*, Nov. 20.

MR. EARLE'S LETTER.

MR. EARLE's letter, published in our last number, has excited a considerable sensation in more quarters than one. The manner in which the subject has been viewed by the gentlemen attending his Clinical Lectures must be as gra-

tifying to his feelings as it is creditable to theirs. Nothing could exceed the cordiality (we might say enthusiasm) with which they received him last Saturday evening.

By the way, can any of our readers guess for what purpose the "copy" was suddenly sent for from the printing office of Messrs. Mills, Jowett, and Mills, when it was already in the hands of the compositor; or who the gentleman was that called in Bedford-Square, at three o'clock on Tuesday the 17th instant, being the day after Mr. Earle's letter was sent to Wakley?

VACCINATION.

THE following appears to us to contain the most *convincing* argument in favour of vaccination which we have yet met with:—

"**SMALL POX.**—Information having been given that this dangerous and infectious disease is very prevalent in various parts of this city, public notice has been issued, by order of a court of mayoralty, recommending to the inhabitants immediately to have recourse to vaccination, and stating that the poor inhabitants may receive from the Corporation of Guardians a reward of two shillings and sixpence for each person who may be vaccinated."—*Bury and Norwich Post*, Nov. 18.

SIAMESE BOYS.

WE had an opportunity of examining these boys at a "private inspection," last Tuesday. We have little to add to the account which we published in the *Gazette* of October 31.

The boys are said to be eighteen years of age: they are rather short; bear the same close resemblance to each other that twins usually do; and both are slightly marked with small pox. They are two perfectly distinct individuals, but connected by a cartilaginous band passing from the lower part of the sternum in

one, to a corresponding point in the other; at the inferior part of this bond of union is *one* umbilicus. Their actions are consentaneous, just as those of any two persons might be supposed to become if they were artificially bound together. There is not a vestige of room for supposing that there is moral connexion between them more close than this. When we published the account forwarded to us by Dr. Ashburner, we conjectured that the boys might be separated by an operation: after having seen them, we still regard this as possible, though its expediency or perfect safety under present circumstances might be matter of question. It is stated, by M. Mayor, in the *Journal de Geneve*, for July 30, 1829, that two girls, united in a similar manner—the union extending from the sternum to the umbilicus—were separated by an operation, and that they both lived.

The boys are very intelligent and observing, various illustrations of which are given by the persons about them. When in America, a gas-chandelier instantly caught the attention of both, which they remarked as "a light without oil or tallow." The steam-engine completely puzzled them; they sat for hours contemplating it, wholly at a loss to account for the power which moved it, till at length the steam being turned off, they seemed at once to perceive that in it the force resided which communicated motion, and from this time their wonder was at an end. Neither do they seem destitute of humour—indeed their countenances express a good deal, and they seem to be much amused with many things passing around them. At Philadelphia, the charge for seeing them was half a dollar, and a gentleman who had lost an eye having come in, one of them remarked that he hoped they had only made him pay a quarter of a dollar, as he had but half the means of seeing them that other people had.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Bite of a Cat.

JOHN HICKS, æt. 24, a sailor, accustomed to free libations, was admitted into Accident Ward, Nov. 2d, 1829, under the care of Mr. Key. He stated that two days since, observing a cat "in fits," he endeavoured to drive it away; but his manœuvres failing, he seized her by the neck, and threw her away, since which he has not seen the cat. However, she in return bit him twice, and retained her teeth in the left thumb, about the joint, for some time. Pain in the thumb and arm came on within twenty-four hours, for which he thought spirits a proper remedy. He had no sleep last night, and is now in a state of excitement. Pulse 110, full and jerking; tongue loaded, and rather dry; heat of skin above the ordinary temperature. Pain in the head, and in the injured thumb and arm, in the latter of which there is an inflammatory blush, extending to the elbow, in the course of the absorbents.

V. S. ad 3xvj. st. Colocynth c. Cal. grs. xx. st. et Opii. gr. j. nocte, si opus fuerit.

Nitrate of silver was freely rubbed on the inflamed parts of the fore-arm, to produce vesication, and a linseed-meal poultice enveloped the hand, the bites being filled with pure liq. ammoniæ.

3d.—His pulse is considerably lowered in force and frequency by the venesection; he has slept well by the aid of the opium pill; and his bowels have been duly acted upon, though not till some house medicine was given. He has no headache; tongue cleaner, and skin moist; the pain in his arm is also decidedly relieved; nor have the inflammatory lines extended since yesterday.

5th.—Yesterday he was altogether better; but to-day his thumb is much swollen, and painfully throbbing. He did not sleep well last night; pulse quick and frequent, tongue furred.

Cap. statim Colocynth c. Calom. gr. xv.

6th.—The purgative pills have acted copiously; he slept better last night. Pulse 88, full, and not readily compressible; tongue much cleaner, and skin moist. He has now neither inflammation, (except the vesication produced by the caustic), nor pain in the arm, and only slight lancinating pains in the thumb. A little pus was evacuated from the site of an old scar, just over the metacarpo-phalangeal joint of the thumb.

9th.—His bowels have required the occasional exhibition of aperient medicine, but his thumb is greatly improved in appearance.

17th.—On moving the joint where the bites were, there is a sense of grating communicated.

23d.—The bites are quite healed, but there appears to be such relaxation of the

lateral ligaments as to produce unnatural grating motion when the joint is curved laterally.

Chronic inflammation and disorganization of the Foot—Amputation.

W. T. æt. 40, was attacked by inflammatory œdema of his right leg about fifteen years ago, which soon subsided under properly applied pressure and rest. A few years after that period he struck his shin, and produced an indolent sore, which, from inattention, became surrounded by considerable cellular inflammation. This inflammation of the cellular web of the foot has never since entirely subsided; and from repeated attacks of adhesive and ulcerative inflammation, his foot has become enormously enlarged, so much so as, on superficial inspection, to resemble elephantiasis. Not only is there extreme induration of the cellular web of the foot, but from its great size, when compared with its fellow, the bones are probably enlarged, there being perhaps some absorption of the phosphate of lime, and a copious deposition of strumous fatty matter, whence the tarsal bones are greatly enlarged and softened. His countenance is pale, perhaps somewhat œdematous. Pulse 120, quick, but compressible. Bowels rather costive, tongue white, and furred.

R Extr. Coloc. c. Calom. gr. x. et Ol. Ricini, 3vj. postea Folus Lini Cruri.

Notwithstanding some slight improvement in the leg, the man submitted to Mr. Key's advice to have the cumbersome member removed. On Tuesday, October 27th, therefore, it was removed in the usual circular mode of amputation, below the knee. Five arteries required to be tied, and it was a long time before the oozing of blood from the stump was so inconsiderable as to warrant his removal from the theatre. The stump was not dressed till two hours after the amputation.

He took two grains of calomel and one grain of opium at night. Some oozing of serous blood continued for about thirty hours afterwards; spasmodic action of the muscles was frequent and severe; but the man continued pretty well till the fourth day, when his stump became tense and painful, and febrile symptoms shewed themselves.

R Ex. Coloc. gr. xij. Calom. gr. iij. st. et postea Haust. Sennæ.

The straps of plaister were snipped, and some sanious matter discharged; and, instead of a cold damp pledget of lint, a bread poultice was applied warm.

5th day.—There is less febrile excitement about him to-day than since the operation, and he slept well last night. The adhesive straps were further divided, and a considerable quantity of bloody pus allowed free exit. The lips of the wound looked free from in-

inflammation where granulating, and at the upper and lower parts were pretty firmly adherent. One of the ligatures was removed to-day, and the others have come away since.

Nov. 10th, (14th day).—He has been progressing well till this morning, when he had a rigor, which was followed by feverishness. There is pain on pressing the right hypogastric region, extending to the loins. His tongue is much furred, and his pulse frequent and quick, though evidently without power; skin hot: the stump looks well.

App. Hirudines, xx. reg. hypogast. Cos. Potus Cruri.

15th day.—There is still some tenderness, increased by pressure. Tongue dry, and darker in colour; bowels have not been opened since yesterday; pulse 128, and quick; respiration more frequent. He has not had any repetition of the rigors.

R Hydr. c. Crota, gr ij. Ext. Conii, gr ij. Pul. Ipec. gr j. in forma Pil. tertius horis cap.

16th day.—He has not slept much during the past night, but considers himself rather better, pulse 128, very compressible, but quick; skin hot; tongue much browner, and moist. The pain in the right epigastrium has subsided, but there is a diffused tenderness over the abdomen. His right lung appears to be now the chief seat of inflammatory action; respiration 50 per minute, and irregular; sound somewhat dull on the right side, about the middle lobe of which lung crepitating rattle may be occasionally heard; he appears rather exhausted.

App. Cucurb. Cruentæ et detrahentæ Sanguinis e. later. dextr. 3vj.

After the cupping his pulse fell to 110, and his pain in respiration was decidedly relieved; but in an hour afterwards the pulse rose in frequency.

17th day.—He has slept better, being more free from pain, which is now confined to the epigastrium; his respiration is less frequent, crepitating rattle not so perceptible, and he breathes with more freedom; expectoration viscid and copious; bowels open; tongue dry and brown; gums are a little sore; pulse 125, quick, but fuller; the stump has not granulated soundly; there are hollows above and below the central of adhesion.

18th day (18th).—He can inspire with pain; has slept well; skin cool; soft, 116, and less quick; tongue red and less brown.

Since the above date he has continued to improve, and is now (Nov. 20th) without any unfavourable symptom.

Excision of a large Portion of the Lower Jaw.
On Tuesday, November 17th, Mr. J.

excised nearly half of the lower jaw of an elderly man, on account of fungoid exostosis. It appeared that he had suffered much from a decayed tooth several months ago, and that, some time after this, swelling of the alveolar processes occurred; which has, within the last two months, increased so rapidly as to thrust out, or render carious, the other teeth on the same side. The man is in good health, and the tumor not very large. Mr. M. amputated the jaw from the symphysis to the ramus. The operation, necessarily tedious, lasted about forty minutes. Not a single bad symptom has appeared since the operation, and at the first dressing much of the wound was adherent.

WESTMINSTER HOSPITAL.

Fractured Sternum and Ulna.

JOHN CLARK, admitted Nov. 26, 1829. States that he was riding, when his horse ran away with him, and came in contact with a cart. He was thrown, and the horse fell upon his body. When he was admitted, he was blanched and breathing with great difficulty. Pulse extremely small, and countenance very anxious. Pupils slightly dilated, and eyes vacant in expression.

On examining him after he was put to bed, a deep depression was observed, about an inch and a half from the lower extremity of the sternum, and the edges of two of the ribs immediately beyond the cartilage were felt projecting beyond their level. The sternum was fractured across the lower portion: the lower edge stood out more than natural, while superiorly—that is to say, at the line of fracture—it was strongly indented, like a half broken stick bent so far as to form an angle. The slightest pressure on the fractured points was attended with great pain. The ulna was also fractured about the middle. He seemed every where else to have escaped injury.

Two hours after the first examination.—His pulse has risen, being more frequent and less feeble; his breathing is not quite so difficult, but he complains of excruciating pain at the seat of the fracture.

Nov. 7th.—He was bled yesterday evening to 3vj. and ordered the following

The roller has been reapplied. The arm is considerably swelled.

Nov. 9th.—He is better to-day.

Haust. Cathart.

Nov. 11th.—He suffers but little inconvenience. His arm has been put up in splints, and he is moving about.

Nov. 15th.—He has merely a slight pain across the chest when he draws in a full breath. His arm is easy.

Nov. 18th.—He says he now suffers no inconvenience whatever from the accident, except the not being able to use his arm.

This case is remarkable from the very rapid manner in which the symptoms of the injury disappeared; and altogether the trifling inconvenience he suffered from the accident, which, on his admission, appeared of a serious nature.

Inflammation of the Hand.

Sarah Broadhurst, æt. 50, admitted Oct. 21st, under the care of Mr. Lynn. This patient had been attending as an out-patient for several weeks, with a diseased hand—one of those cases where inflammation attacks a part without any evident cause—going on to suppuration, and destroying ligaments, bones, &c.

About eight weeks ago, she was seized with a pain in her right side, and two days after it seemed to shoot across her body and fix in her hand. In the course of a couple of days it had swelled; the skin was distended and black; she felt it hot, and excessively painful. The hand and arm was fomented, and she was afterwards bled. It was fomented for a fortnight, and then poulticed for a week. During this time it remained much the same; greatly swelled, and very painful. She cannot attribute it to any cause, except that she fell down, about two years ago, and hurt her elbow, never having been able to lean upon it since.

She has been married upwards of thirty years, and had nine children: the last was born fourteen years ago. She began to menstruate about the age of seventeen, and ceased six years ago. She has always enjoyed remarkably good health, been excessively strong, and free from pain of every kind.

Oct. 25.—The hand and wrist is at present red, swelled, and stiff. She complains of great pain, particularly at night. On moving the wrist, the bones of the carpus may be heard to "clink" against each other. She has no pain except in the diseased part. Bowels open; tongue clean; pulse rather weak, otherwise natural. Fomentations to the part.

Oct. 29th.—There is scarcely any alteration in the hand.

Nov. 4th.—The hand has been improving considerably. There is less heat and pain.

She has been kept perfectly quiet. She has determined on going out to-day, on account of her husband's illness.

CHELTENHAM CASUALTY HOSPITAL.

Severe Case of Vomiting attending Pregnancy.
Treated by Dr. CHRISTIE.

ELIZABETH JOHNSON, æt. 23, admitted a patient August 2, 1828; she was seized yesterday with violent vomiting and pain in the bowels, which lasted nearly the whole of the day without intermission, but she did not apply for relief till this morning early. She then complained of pain in the epigastrium (which was relieved by pressure), and continued vomiting (of a brown colour). She appeared to be very much exhausted, and laboured under great prostration of strength. Her bowels had not been opened for three days. Urine of a natural colour; pulse rather small, and beat about 80; tongue loaded with a whitish fur; body cold, and covered with perspiration. She is about two months gone with child.

Ordered Mist. Effervescens. c. Liq. Opii Sedat. Pil. Calomel. Ext. Col. c. et Ol. Croton.

3d.—Vomiting and pain in the stomach unabated; pulse as yesterday; bowels hard; no tenderness on pressure.

Applic. Emplast. Cantharid. Regioni Epigast. Contin. Pil. et Mist. Efferves. Ordered to have large enemata.

4th.—The vomiting has not ceased for more than an hour throughout, except yesterday, when, after the blister was dressed, she thought it was nearly two hours before it returned, but it then came on with increased violence. Repeat enemata.

R Hydrarg. Sub. gr. xij. Pil. Saponis c. Opio, gr. xvij. Ol. Cinnamon. mjj. Fiat Pil. vi. Capiat, j. tertius hora.

5th.—Vomiting rather worse, and the fluid which is thrown up is about the colour of tea. Pulse rather full, and quicker than yesterday; bowels open; slight pain on pressure; tongue cleaner on the sides, and red.

Fiat V. S. ad 3xvi. R Aquæ Cinnamon, 3ij. Tinct. Opii, 3i. m. Capiat, 3ss, omni tertia hori.

6th.—Stomach still as irritable as yesterday, and rejects every thing taken. Pulse not so full, but she complains of great pain in the epigastric region, increased by pressure.

example, a man whose constitution is utterly enfeebled by intemperate habits, with whom there exists an absolute deficiency of vital power, both locally and generally, becomes infected with a venereal sore on the penis, which, in a man of healthy constitution, would readily yield to common means, but with him rapidly spreads, and the contiguous parts speedily become gangrenous. A similar condition of system may be engendered by a combination of circumstances operating upon a previously healthy habit; such as the profuse exhibition of mercury, and confinement in the crowded wards and tainted atmosphere of an hospital. It is scarcely necessary to say, that the two latter causes act upon a diseased habit with tenfold fury.

"After saying thus much of the pathology of sloughing venereal ulcers, it is unnecessary to enter into a minute detail of the requisite treatment, which here, as elsewhere, must be regulated by circumstances. I may briefly observe, that those cases which are obviously dependent upon increased vascular action, are most under control, as, by a judicious and early use of antiphlogistic means, it is in our power at once to arrest the progress of disease."

"Gonorrhœal Ophthalmia."

"It will not be considered irrelevant briefly to advert here to that most destructive form of ophthalmia which occasionally prevails during the progress of gonorrhœa, and which I believe to be in every instance produced by the direct application of the urethral discharge to the eye.

"The attack of this species of ophthalmia is generally very sudden: for the most part one eye only is affected, but occasionally the disease affects both, and there is then sometimes, though not generally, a diminution or suppression of the disease from the urethra. The seat of the disease, in the first instance, is in the membrana conjunctiva, which becomes red and swollen to a great degree, and with a rapidity which has no parallel in any other condition of this organ. The inflammation quickly extends to the cornea; a profuse purulent discharge takes place from within both the upper and lower palpebræ; the vessels of the transparent cornea become injected with red blood, and complete chemosis often ensues in forty-

eight hours, or even less. The rapidity with which the conjunctiva becomes engorged is sometimes truly astonishing, everting both the lids; and the discharge is profuse beyond what could be conceived, either from the space which affords it, or the time in which the disease runs its course. The pain attending it is extreme, and the symptoms of constitutional disturbance very severe. The inflammation extends into the interior of the eye, producing a sudden effusion of lymph into the anterior chamber, and ultimately ulceration or rupture of the cornea, and consequent destruction of the eye.

"It is obvious that in the treatment of these cases—where disease runs its course with such frightful rapidity—we must be proportionally active in our remedial means. Large blood-lettings, repeated according to circumstances, and the exhibition of tartrate of antimony, so as to induce and keep up nausea and faintness, are two of the most powerful agents in subduing inflammation. But my experience in the treatment of this disease leads me to prefer the exhibition of calomel in conjunction with the antimony; as, for instance, if we suppose an extreme case in which blood has been quickly abstracted to the amount of thirty, and I have sometimes bled even to forty ounces, I then commence with two grains of calomel and a quarter or a sixth of a grain of tartrate of antimony every hour or two.

"The pre-eminent value of calomel in arresting acute inflammation of *serous* membranes is so well known, and the remedy so generally had recourse to, that it would be superfluous to say any thing on that point; but I have always been of opinion that the importance of calomel in arresting acute inflammation of *mucous* membranes has not been sufficiently acted upon. If I should not be considered as entirely deviating from my subject, I would specially notice the utility of mercury in cases of acute inflammation of the lining membrane of the larynx, trachea, and bronchi.

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though pushed to the utmost extreme, in subduing this species of ophthalmia, a practice diametrically reverse in its nature has recently been adopted by several army surgeons. It consists in dropping into the eye a strong solution of nitrate of silver; ten, fifteen, or twenty grains to an ounce of distilled water. This practice is had recourse to in the commencement of the severest form of conjunctival ophthalmia; and it is said, that so far from producing, as might be supposed, any increase of pain, it is attended with the most decided advantages; the pain and redness of the membrane being overcome almost immediately, and the cure effected, even without the abstraction of blood. The testimonies in favour of this practice in conjunctival inflammation are, I must acknowledge, so satisfactory, that I should not hesitate to adopt it in gonorrhœal ophthalmia.

"There is a kind of chronic ophthalmia which occurs in conjunction with the rheumatic pains and swellings of the joints already described as occasionally taking place in the progress of gonorrhœa. This affection is very different from the formidable disease which I have just described. It appears that the conjunctiva, in common with the other mucous membranes of the body, is in a disordered condition; and it is worthy of remark, that in some instances this ophthalmic affection alternates with the pains in the limbs."

"Fungus of the Testicle."

"This disease is by no means of rare occurrence. Sometimes phlegmonous inflammation of the testicle terminates in a small abscess, which bursts, and from the ulcerated opening the fungus gradually protrudes. In other cases, a painful swelling of the testicle, particularly characterized by its hardness, is the first symptom of the disease. After an uncertain period of time, the integuments, growing gradually thinner, ulcerate; and after a slight discharge of matter, a firm and generally insensible fungus protrudes; the surrounding integuments are much thickened and indurated, so that there appears a considerable mass of disease; the pain abates, and the swelling subsides considerably after the integuments have given way. In this state the disorder appears very indolent; but if the fungus be destroyed by any means, the integuments come together, and a cicatrix is formed.

"The fungus has its origin in the glandular substance of the testis itself, the coats of which are destroyed to a certain extent, and a protrusion of the tubuli seminiferi takes place through the aperture. Sometimes, however, a fungous growth arises only from the tunica albuginea, the testicle itself being sound.

"In many instances the disease seems to be caused or accompanied by a morbid condition of the lining membrane of the urethra.

"The state of the testicle will serve to distinguish this disease from those fungi of a malignant character which frequently are situated on this part, and usually are the result of cancer or fungus hæmatodes of this organ, and wherein early extirpation is the only treatment which offers a chance of relief.

"It is to be remembered, in the treatment of this affection, that the fungus has no character of malignity attached to it, and consequently castration is never requisite, as regards the disease simply. With a view of bringing the case to a speedy termination, when the structure is so far destroyed that the discerning powers of the organ are lost, we may recommend complete extirpation; but in a majority of cases, by early attention, a milder treatment will suffice.

"When the disease has clearly originated in consequence of irritation communicated to the testicle by a morbid state of the urethra, the swelling will frequently subside, the fungus shrink, and a complete cure will be effected, on the removal of the cause by the means recommended in treating of disorders of the urinary passage. It is probable, indeed, that in other cases a cure might be accomplished by the unaided efforts of nature; the disease, however, is of so indolent a character that a spontaneous cure would prove a tedious process.

"The fungus may be removed with the knife, by ligature, or by escharotics; and likewise it may be got rid of by absorption under the use of pressure constantly applied. If the projection be large, it is perhaps the best practice to cut off the fungus, and having pared the hardened edges of the integuments, to bring them as closely in apposition as possible. The treatment by ligature is tedious. Of the escharotic applications, the nitrate of silver is preferable; it should be applied freely, dry lint should then be put over the part, and firm pressure made use of by the appli-

cation of adhesive plaister. Under the conjoined influence of the caustic, which effects the removal of the outer and less sensible part by sloughing, and the process of absorption excited by the pressure, the disease is more quickly removed than if either of the means were used singly. I have witnessed the application of a solution of arsenic in two instances: in one case very unpleasant symptoms arose from the absorption of this active poison, and in the other case there was less decided advantage than results from the lunar caustic, although no untoward constitutional derangement was produced.

"If after the removal of a fungus, the remaining portion of the testicle continue indurated and enlarged, it is advisable to have recourse to mercurial frictions, under the use of which, absorption of the interstitial deposit will take place."

The account of elephantiasis of the scrotum is particularly full, the author having had repeated opportunities of observing the disease in the West Indies, and where he operated on six patients by the removal of the diseased mass, all of whom recovered.

We may mention, that in the preliminary essay the author has endeavoured to shew "that no type of lues venerea now known can be proved or justly presumed to have been unknown in the earliest ages; historical evidence is against such a decision; and no symptomatic criterion between modern syphilis and various other venereal affections (followed by secondary symptoms) now known and included in the new plague of 1494—1496, has yet been demonstrated. And having moreover shown that mercury is in no sense a specific for any venereal disease, I maintain further, that lues is not a specific disease, inasmuch as its probable cause cannot be separated by any sure distinction from the cause of those affections described under the denomination of pseudo-syphilis, and which have been believed to be produced independent of sexual intercourse."

As the prostate is decidedly more a part of the genital than any other system, we are at a loss to account for its entire omission by our author; and when his work comes to a second edition, (which will probably be at no distant period,) we would recommend to him to supply this deficiency.

MEDICAL GAZETTE.

Saturday, Nov. 28, 1829.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

REGULATIONS OF THE COLLEGE OF SURGEONS.

THE new code of regulations which has recently been issued by the Council of the London College of Surgeons, must be looked upon by every unprejudiced person as an improvement on those which they are intended to supersede. One of the most important changes relates to the attendance on provincial hospitals; a point, to the impolicy and injustice of which, as it stood in the late regulations, we have repeatedly directed attention.

On the last occasion of our adverting to the subject, we remarked, "the admission of some of the provincial towns to more equal terms is a demand so obviously just that we have no hesitation in saying, not only that they (the Council) ought to concede it, but that they must do so." A concession has accordingly been made. Four years' attendance on a provincial hospital was formerly required as equivalent to six months' corresponding attendance in London, Dublin, Edinburgh, Glasgow, or Aberdeen; whereas now the pupil is required to have attended only one year. But still a bone of contention is left, for with regard to the remaining six months, no period is admitted as an equivalent. As to the propriety of this regulation, there will probably be much difference of opinion; and as Uncle Toby very sagaciously remarks, "much may be said on both sides of the question." For ourselves we have no hesitation in stating that we regard the regulation as calculated to secure to the student better opportunities of learning his profession than he

would be likely otherwise to obtain ; and therefore it is fair to presume that the stock of knowledge which he lays in will be more extensive than if no such provision existed. Now if this be the test by which the measure is to be tried, we think there can be no doubt of its expediency. Neither have we any hesitation in affirming that the pupil who passes the first years of his professional studies in a provincial town, and comes to London with his mind already cultivated and prepared to receive every addition with avidity, will become a more accomplished surgeon than one whose education has begun and ended either in a provincial town or in the metropolis. One advantage, of no inconsiderable value, thus secured to him, will be that of attending the practice of two different hospitals. Any man who has seen much of our profession must have observed how apt the student is to pin his faith to the dicta of his teacher, adopting not only his opinions, but often his prejudices with them. If he settles in life at once, without an opportunity of witnessing the practice of others, his views remain permanently limited ; he sees only through the medium to which he has been accustomed ; or if he acquires a habit of seeing and thinking for himself, it is after a much longer period, and much more extensive experience. But if he attends in early life the practice and lectures of competent persons at different schools, he soon feels the necessity of judging for himself, and acquires a habit of referring to the book of nature as the only unerring authority by which the value of conflicting opinions can be duly estimated.

Were it left for the student to pursue what course his fancy might suggest ; were he told to acquire knowledge when and where he chose, without any defined curriculum, the standard of education would necessarily be lowered, and the door opened wide to the admission of a

crowd of persons from the lower classes of the community, who would be tempted, by the increased facilities and diminished expense, to enter a profession already over stocked. Every operative in Manchester would endeavour to make his son a *doctor* and a *gentleman*, till, in a few years, the unfortunate youth would envy the mechanical occupation of his father, and think that a village over-stocked with surgeons was worse than a market glutted with silks.

The outcry of the *levellers* (who, by the way, are now reduced to a few disappointed individuals, "the cankers of a calm world and a long peace,") is, that the meritorious part of the profession are starving ; and yet, with the same breath, they vociferate, down with all barriers—let merit be the only test—if merit met with its reward we should not be without practice, and our great champion would be at the head of his profession, instead of being restricted for a fortnight to a single patient—"a decent woman, lodging in Avery-Row." That distress does prevail in our profession, as well as in most other departments of the community, we cannot doubt. But while we admit this fact, and would willingly, in any reasonable manner, make our Journal instrumental to the relief of our suffering brethren, we must at the same time express our strong conviction that, in the great majority of cases, entire failure in practice is dependent upon incapacity or imprudence on the part of the individual ; and that they who now hunger after bread, are chiefly those persons who, in early life, never thirsted after knowledge. But from whatever cause the evil may arise, is it not a monstrous absurdity, with the fact of the profession being already too much crowded staring us in the face, to demand such changes in the system of education as would immediatel

render admission into it more easy, and success, when admitted, more difficult? In our opinion it ought, with all the corporate bodies, to be a fundamental principle to raise, rather than to depress, the standard of education; and every fair and rational means to accomplish the former object shall receive what assistance our humble support can afford it.

But to return. There is one rather amusing contradiction in the present regulations of the College of Surgeons, as to the period of study required; and which, if not a mere oversight, would seem to evince the very Quixotism of disinterestedness, instead of that abandoned devotion to Mammon which we are weekly assured the members of the council unanimously betray. It is, that candidates are required to bring proof "of having been engaged six years in the acquisition of professional knowledge." And again—

"Members and licentiates in surgery, of any legally constituted College of Surgeons in the united kingdom, and graduates in surgery of any university requiring residence to obtain degrees, will be admitted for examination on producing their diploma, license, or degree."

Now, as in other places four years is the minimum duration of study required, it is quite clear that the shortest route to Lincoln's-Inn Fields is by the way of Dublin, Glasgow, or Edinburgh. By this arrangement, too, the student, in his curriculum, need not so much as come within sight of any of those "human slaughterhouses," the London Hospitals, or any of the "Vampires" who live upon the blood of the patients. We marvel that our ingenuous contemporary has not expatiated on the great advantages to which this must give rise.

The greatest defects, however, in our opinion, as to these new regulations, are, first, that no order of succession in which the different branches of study

shall be followed, is enjoined; and, secondly, that the period of hospital attendance is so short. With regard to the former, it is indeed "recommended" that candidates shall have studied anatomy by attendance on lectures, and by dissections, during one season prior to attending the practice of an hospital: but of what use is it to "recommend," when the neglect of the recommendation carries with it no forfeit? If the advice be proper (which unquestionably it is), then ought it to have been made imperative, and not left optional. Anatomy, as we have elsewhere stated, is the very elements of surgery; and it is as necessary that a pupil should be master of it before he enters upon the study of surgery by lectures or hospital attendance, as that a boy should learn the Latin grammar before he attempts to construe. If, as many do, the pupil enter to his anatomy and hospital at the same time, such arrangement is injurious to both pursuits, and ruinous to the latter. He dissects till the latest moment—arrives at the hospital, perhaps, when the surgeon is already come, and contents himself with forming part of his "tail" for an hour, or perhaps but half that time; then hurries back to the anatomical lecture. And this leads us to remark, that the hours selected for teaching the different branches of medicine in London, are essentially bad. It would be much better that all the anatomical business should be completed before visiting the hospital. Full time should then be given for this; say from 12 to 2, or from 1 to 3, after which should come the lectures on disease, whether medical or surgical, while the mind of the student is fresh from its contemplation. Thus would the objects presented to him follow each other in natural succession, without that loss of time and jumble of ideas which result from the present system. According to the ex-

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SENTENCE IN THE CASE OF CLAPHAM.

THE sentence of the law has been pronounced against John Clapham, the unfortunate and misguided youth whom Wakley brought forward as a witness against Mr. B. Cooper. He has been condemned to six months' imprisonment in the common gaol. This is one of the fruits of that system of deception practised upon the young and inexperienced, by which they are led to the belief, that the various Corporate Institutions of this country are illegal; because it suits the interested purpose of a flagitious journalist to call them so. This belief once adopted, the next step is easy. "If they be not lawful," say these sophists, "it cannot be unlawful to overreach them;" and thus do they commit those misdemeanors which are visited with such serious and disgraceful punishment—punishment which not only interferes with a young man's prospects for the time, but which

fixes a brand of infamy upon his brow which can never be effaced. We are the more anxious to insist upon this point, because we know that a large number of cases have lately occurred, in which attempts have been made to practise various deceptions upon the Society of Apothecaries. We beseech those who would avoid getting into trouble, if actuated by no better motive—to take warning by the case we now record.

"Mr. Justice BAYLEY, after the Judges had conferred together for a few minutes, addressed the defendant, and said that no man with proper feelings of morality, or proper feelings of integrity, could fail to shrink from the means which the defendant had adopted to procure his license from the Apothecaries' Company. The question was not one of fitness or unfitness in any particular individual to practise as an apothecary. The legislature had determined that no man should practise unless he had passed a regular examination before the Court of Examiners of the Apothecaries' Company, and that that Company should not be at liberty to grant a license to any person who should be under the age of 21 years. It had been represented by the affidavits that the defendant's father bore a most unexceptionable character, and that the character of the defendant himself, with this single exception, was also unimpeachable; but this was a most momentous exception; for no man of right feelings would ever have ventured to do that which the defendant had done. The sentence of the court was, that he be imprisoned in the gaol at Huntingdon for the county of Huntingdon, for the space of six calendar months, and in the meantime be committed to the custody of the Marshal of the Marshalsea."—*Times*, Nov. 20.

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"From a conviction of the insufficiency of the antiphlogistic treatment,

though pushed to the utmost extreme, in subduing this species of ophthalmia, a practice diametrically reverse in its nature has recently been adopted by several army surgeons. It consists in dropping into the eye a strong solution of nitrate of silver; ten, fifteen, or twenty grains to an ounce of distilled water. This practice is had recourse to in the commencement of the severest form of conjunctival ophthalmia; and it is said, that so far from producing, as might be supposed, any increase of pain, it is attended with the most decided advantages; the pain and redness of the membrane being overcome almost immediately, and the cure effected, even without the abstraction of blood. The testimonies in favour of this practice in conjunctival inflammation are, I must acknowledge, so satisfactory, that I should not hesitate to adopt it in gonorrhœal ophthalmia.

"There is a kind of chronic ophthalmia which occurs in conjunction with the rheumatic pains and swellings of the joints already described as occasionally taking place in the progress of gonorrhœa. This affection is very different from the formidable disease which I have just described. It appears that the conjunctiva, in common with the other mucous membranes of the body, is in a disordered condition; and it is worthy of remark, that in some instances this ophthalmic affection alternates with the pains in the limbs."

"Fungus of the Testicle."

"This disease is by no means of rare occurrence. Sometimes phlegmonous inflammation of the testicle terminates in a small abscess, which bursts, and from the ulcerated opening the fungus gradually protrudes. In other cases, a painful swelling of the testicle, particularly characterized by its hardness, is the first symptom of the disease. After an uncertain period of time, the integuments, growing gradually thinner, ulcerate; and after a slight discharge of matter, a firm and generally insensible fungus protrudes; the surrounding integuments are much thickened and indurated, so that there appears a considerable mass of disease; the pain abates, and the swelling subsides considerably after the integuments have given way. In this state the disorder appears very indolent; but if the fungus be destroyed by any means, the integuments come together, and a cicatrix is formed.

"The fungus has its origin in the glandular substance of the testis itself, the coats of which are destroyed to a certain extent, and a protrusion of the tubuli seminiferi takes place through the aperture. Sometimes, however, a fungous growth arises only from the tunica albuginea, the testicle itself being sound.

"In many instances the disease seems to be caused or accompanied by a morbid condition of the lining membrane of the urethra.

"The state of the testicle will serve to distinguish this disease from those fungi of a malignant character which frequently are situated on this part, and usually are the result of cancer or fungus hæmatodes of this organ, and wherein early extirpation is the only treatment which offers a chance of relief.

"It is to be remembered, in the treatment of this affection, that the fungus has no character of malignity attached to it, and consequently castration is never requisite, as regards the disease simply. With a view of bringing the case to a speedy termination, when the structure is so far destroyed that the discerning powers of the organ are lost, we may recommend complete extirpation; but in a majority of cases, by early attention, a milder treatment will suffice.

"When the disease has clearly originated in consequence of irritation communicated to the testicle by a morbid state of the urethra, the swelling will frequently subside, the fungus shrink, and a complete cure will be effected, on the removal of the cause by the means recommended in treating of disorders of the urinary passage. It is probable, indeed, that in other cases a cure might be accomplished by the unaided efforts of nature; the disease, however, is of so indolent a character that a spontaneous cure would prove a tedious process.

"The fungus may be removed with the knife, by ligature, or by escharotics; and likewise it may be got rid of by absorption under the use of pressure constantly applied. If the projection be large, it is perhaps the best practice to cut off the fungus, and having pared the hardened edges of the integuments, to bring them as closely in apposition as possible. The treatment by ligature is tedious. Of the escharotic applications, the nitrate of silver is preferable; it should be applied freely, dry lint should then be put over the part, and firm pressure made use of by the appli-

dent that gave rise to this man's complaint), the curve is more acute, since it is constituted by the deviation of no less than seven vertebræ from their places. But although, by the undermining of the columnar, or the anterior part of the spine, the projection is generally forward, there is nothing to prevent the bodies of the vertebræ giving way towards one side, and producing, therefore, a degree of lateral twist which might lead the practitioner to conceive that he had to deal with a case of lateral distortion. We have an instance of this in the case of Akers.

Emma Akers, æt. 7, Northumberland Ward, was admitted Nov. 10th, with curvature of the spine, attended with distortion of the bones of the chest. The spinous process of the third or fourth dorsal vertebra projects, and there is a slight bend to the left, by which the right shoulder is elevated higher than the left. There is no paralysis. She complains of pain on the left side, near the cartilages of the false ribs, and she attributes this to one of her companions striking her here. Her mother used every morning to press heavily upon the right shoulder, to reduce it to the same level with the left; and this gave great pain to the little girl, especially near the margins of the chest. She has been relieved of the pain in her side by the application of issues to the projecting part of the spine. It is not possible to rely on the account which she gives of the origin of the complaint.

In this case, you will observe that the distortion is lateral, and has the usual effects upon the shoulders. Yet the case is one of scrofulous disease of the vertebræ. But to recal us to the proper subject, I shall take the case of Langhurst.

Edward Langhurst, æt. 21, a farmer's servant, was admitted into Hertford Ward, November 3d, with complete paralysis of the muscles of the lower extremities, the sensation remaining perfect. He states that two years ago, after having caught cold from being exposed to the rain, he first began to feel pain in his stomach: this pain never left him, and he got weaker, so that in the course of a year he had great difficulty in doing his work.

Eight months ago, he lost the power of moving his limbs, and there was a numbness extending all the way from the umbilicus to the toes. Three weeks before he presented himself at the hospital, the sensation returned to the limbs; so that it was quite natural. He was easily purged, and then his stools passed involuntarily: he lost the

power of retaining his urine. He declared that he had no pain in his back. On examination, the spinous processes of the vertebræ in the centre of the back were seen to project, but not to a very great degree.

He died on the same night as the patient Field, and it was thought that he was very much alarmed by seeing this patient, who had the same complaint as himself, dying. His previous symptoms did not seem to indicate that his death was so near.

Dissection.—The bodies of these vertebræ in which the spines were seen to project, were fallen together, and were surrounded by much thickened cellular membrane. There were adhesions between the liver and the diaphragm, but there was no other remarkable morbid appearance in the chest or abdomen.

You see enough, then, of the scrofulous disease and wasting of the bodies of the vertebræ. The anatomical examination of the spine must have informed you that the vertebræ are of that class of bones, light and spongy in their interior texture, with a very thin cortex, which are exposed to scrofulous disease, and which are apt to take this peculiar inflammation upon them when injured. You perceive the chasm that is left by the absorption of the bodies of the vertebræ, and can determine on the impropriety of that treatment in which the patient is raised by instruments, or extended horizontally. No doubt the spine may be made straight and the height increased, by this treatment, so as to give rise to flattering anticipations: but the ill adjustment of the instrument endangers the sudden falling down of the spine, by which the spinal marrow may be injured to a fatal degree. You also see, by these other specimens, the process of cure: that it is by the ankylosis of the bodies of the vertebræ and the cessation of motion; it is by the removal of the motion, which is the great source of irritation, that the inflammation also ceases. How can all this take place if the remaining surfaces of the diseased vertebræ be held apart by means of instruments? I am not now arguing against the employment of proper means, but the abuse of them. The instruments must be employed to steady the trunk against lateral motion, and to sustain the weight of the upper part of the body—thereby to prevent the pressure and attrition of the inflamed surfaces of the bones, but not to separate the surfaces.

[To be concluded in the next number.]

would be likely otherwise to obtain ; and therefore it is fair to presume that the stock of knowledge which he lays in will be more extensive than if no such provision existed. Now if this be the test by which the measure is to be tried, we think there can be no doubt of its expediency. Neither have we any hesitation in affirming that the pupil who passes the first years of his professional studies in a provincial town, and comes to London with his mind already cultivated and prepared to receive every addition with avidity, will become a more accomplished surgeon than one whose education has begun and ended either in a provincial town or in the metropolis. One advantage, of no inconsiderable value, thus secured to him, will be that of attending the practice of two different hospitals. Any man who has seen much of our profession must have observed how apt the student is to pin his faith to the dicta of his teacher, adopting not only his opinions, but often his prejudices with them. If he settles in life at once, without an opportunity of witnessing the practice of others, his views remain permanently limited ; he sees only through the medium to which he has been accustomed ; or if he acquires a habit of seeing and thinking for himself, it is after a much longer period, and much more extensive experience. But if he attends in early life the practice and lectures of competent persons at different schools, he soon feels the necessity of judging for himself, and acquires a habit of referring to the book of nature as the only unerring authority by which the value of conflicting opinions can be duly estimated.

Were it left for the student to pursue what course his fancy might suggest ; were he told to acquire knowledge when and where he chose, without any defined curriculum, the standard of education would necessarily be lowered, and the door opened wide to the admission of a

crowd of persons from the lower classes of the community, who would be tempted, by the increased facilities and diminished expense, to enter a profession already over stocked. Every operative in Manchester would endeavour to make his son a *doctor* and a *gentleman*, till, in a few years, the unfortunate youth would envy the mechanical occupation of his father, and think that a village over-stocked with surgeons was worse than a market glutted with silks.

The outcry of the *levellers* (who, by the way, are now reduced to a few disappointed individuals, "the cankers of a calm world and a long peace,") is, that the meritorious part of the profession are starving ; and yet, with the same breath, they vociferate, down with all barriers—let merit be the only test—if merit met with its reward we should not be without practice, and our great champion would be at the head of his profession, instead of being restricted for a fortnight to a single patient—"a decent woman, lodging in Avery-Row." That distress does prevail in our profession, as well as in most other departments of the community, we cannot doubt. But while we admit this fact, and would willingly, in any reasonable manner, make our Journal instrumental to the relief of our suffering brethren, we must at the same time express our strong conviction that, in the great majority of cases, entire failure in practice is dependent upon incapacity or imprudence on the part of the individual ; and that they who now hunger after bread, are chiefly those persons who, in early life, never thirsted after knowledge. But from whatever cause the evil may arise, is it not a monstrous absurdity, with the fact of the profession being already too much crowded staring us in the face, to demand such changes in the system of education as would immediatel

render admission into it more easy, and success, when admitted, more difficult? In our opinion it ought, with all the corporate bodies, to be a fundamental principle to raise, rather than to depress, the standard of education; and every fair and rational means to accomplish the former object shall receive what assistance our humble support can afford it.

But to return. There is one rather amusing contradiction in the present regulations of the College of Surgeons, as to the period of study required; and which, if not a mere oversight, would seem to evince the very Quixotism of disinterestedness, instead of that abandoned devotion to Mammon which we are weekly assured the members of the council unanimously betray. It is, that candidates are required to bring proof "of having been engaged six years in the acquisition of professional knowledge." And again—

"Members and licentiates in surgery, of any legally constituted College of Surgeons in the united kingdom, and graduates in surgery of any university requiring residence to obtain degrees, will be admitted for examination on producing their diploma, license, or degree."

Now, as in other places four years is the minimum duration of study required, it is quite clear that the shortest route to Lincoln's-Inn Fields is by the way of Dublin, Glasgow, or Edinburgh. By this arrangement, too, the student, in his curriculum, need not so much as come within sight of any of those "human slaughterhouses," the London Hospitals, or any of the "Vampires" who live upon the blood of the patients. We marvel that our ingenuous contemporary has not expatiated on the great advantages to which this must give rise.

The greatest defects, however, in our opinion, as to these new regulations, are, first, that no order of succession in which the different branches of study

shall be followed, is enjoined; and, secondly, that the period of hospital attendance is so short. With regard to the former, it is indeed "recommended" that candidates shall have studied anatomy by attendance on lectures, and by dissections, during one season prior to attending the practice of an hospital: but of what use is it to "recommend," when the neglect of the recommendation carries with it no forfeit? If the advice be proper (which unquestionably it is), then ought it to have been made imperative, and not left optional. Anatomy, as we have elsewhere stated, is the very elements of surgery; and it is as necessary that a pupil should be master of it before he enters upon the study of surgery by lectures or hospital attendance, as that a boy should learn the Latin grammar before he attempts to construe. If, as many do, the pupil enter to his anatomy and hospital at the same time, such arrangement is injurious to both pursuits, and ruinous to the latter. He dissects till the latest moment—arrives at the hospital, perhaps, when the surgeon is already come, and contents himself with forming part of his "tail" for an hour, or perhaps but half that time; then hurries back to the anatomical lecture. And this leads us to remark, that the hours selected for teaching the different branches of medicine in London, are essentially bad. It would be much better that all the anatomical business should be completed before visiting the hospital. Full time should then be given for this; say from 12 to 2, or from 1 to 3, after which should come the lectures on disease, whether medical or surgical, while the mind of the student is fresh from its contemplation. Thus would the objects presented to him follow each other in natural succession, without that loss of time and jumble of ideas which result from the present system. According to the ex-

isting arrangements, the student probably opens the day with dissecting a little; but scarcely has he well begun when he is obliged to leave off, that he may attend his lectures on *materia medica* and the practice of medicine—his mind yet occupied with the *subject* he has just left. The lecture being ended, back he goes to dissect or to demonstration; after which he hurries to the hospital—returns to his anatomy—and has his surgery in the evening. A certain degree of variety is necessary to keep up attention, but changes so numerous and rapid as these cannot fail to confuse, and the alternation of ideas in the pupil's mind, could it be shewn on paper, would present the departments of science as arbitrarily, but not so distinctly depicted, as the intellectual organs in one of Mr. Deville's casts, or "the provinces in a map of revolutionary France."

SENTENCE IN THE CASE OF CLAPHAM.

THE sentence of the law has been pronounced against John Clapham, the unfortunate and misguided youth whom Wakley brought forward as a witness against Mr. B. Cooper. He has been condemned to six months' imprisonment in the common gaol. This is one of the fruits of that system of deception practised upon the young and inexperienced, by which they are led to the belief, that the various Corporate Institutions of this country are illegal; because it suits the interested purpose of a flagitious journalist to call them so. This belief once adopted, the next step is easy. "If they be not lawful," say these sophists, "it cannot be unlawful to overreach them;" and thus do they commit those misdemeanors which are visited with such serious and disgraceful punishment—punishment which not only interferes with a young man's prospects for the time, but which

fixes a brand of infamy upon his brow which can never be effaced. We are the more anxious to insist upon this point, because we know that a large number of cases have lately occurred, in which attempts have been made to practise various deceptions upon the Society of Apothecaries. We beseech those who would avoid getting into trouble, if actuated by no better motive—to take warning by the case we now record.

"Mr. Justice BAYLEY, after the Judges had conferred together for a few minutes, addressed the defendant, and said that no man with proper feelings of morality, or proper feelings of integrity, could fail to shrink from the means which the defendant had adopted to procure his license from the Apothecaries' Company. The question was not one of fitness or unfitness in any particular individual to practise as an apothecary. The legislature had determined that no man should practise unless he had passed a regular examination before the Court of Examiners of the Apothecaries' Company, and that that Company should not be at liberty to grant a license to any person who should be under the age of 21 years. It had been represented by the affidavits that the defendant's father bore a most unexceptionable character, and that the character of the defendant himself, with this single exception, was also unimpeachable; but this was a most momentous exception; for no man of right feelings would ever have ventured to do that which the defendant had done. The sentence of the court was, that he be imprisoned in the gaol at Huntingdon for the county of Huntingdon, for the space of six calendar months, and in the meantime be committed to the custody of the Marshal of the Marshalsea."—*Times*, Nov. 20.

MR. EARLE'S LETTER.

MR. EARLE's letter, published in our last number, has excited a considerable *sensation* in more quarters than one. The manner in which the subject has been viewed by the gentlemen attending his Clinical Lectures must be as gra-

in every form of extensive burn, as the impaired functions of the integuments of the body would throw an additional burthen on the lungs. You are well aware that, in a state of health, there is a constant transpiration going on from the whole surface : when this is checked by sudden cold, pneumonia or pleurisy, or peritonitis, not unfrequently ensues. Exactly the same effect is produced by extensive burns or scalds which necessarily interfere with this most important function of the skin. When you have reason to suspect this to be the case, bleeding, both general and local, may be required ; but generally salines, particularly small and repeated doses of nitrate of potash, by increasing the action of the kidneys, will render this unnecessary. It occasionally happens, that even in these slighter burns the constitution participates, and severe rigors occur, with much depression of the vital powers. Of course, when such circumstances take place, the employment of cold is prohibited.

Let us now consider the opposite, or stimulating treatment, as applicable to such cases. This plan is also of great antiquity. Aristotle recommended that the burnt or scalded part should be exposed to the heat of the fire, to "draw out" the fire, on the well-known principle, probably, of the sun extinguishing a common fire. A long list of illustrious names might be adduced in favour of this plan—not to omit Shakspeare, who says,

"Fire cools fire within the scorched veins of one new burnt."

But I will not detain you further than by saying that it is now exploded, as causing much and unnecessary pain, and as perfectly inadmissible in any extensive burn. A host of stimulating applications have had their advocates in different ages ; and in looking dispassionately over the authorities and experience which have been recorded, it cannot be denied that very many cases have terminated by resolution, under every modification of treatment. It will, perhaps, be best to cut this Gordian knot, by simply referring these cases, not to any specific agency in the remedies employed, but to the efforts of nature, which, in many cases, in spite of every thing, will be crowned with success. Different oils, and various unctuous substances, have been highly extolled, and no doubt they are frequently beneficial. To me it appears that the benefit to be

derived from them all may be referred to one common principle — namely, excluding the air from the inflamed surface ; which never fails to stimulate the parts, and to excite an injurious degree of reaction. These observations apply with tenfold force to cases of the second and third order, where the inflamed cutis is exposed ; but even when the surface is not abraded or broken, the oxygen of the atmospheric air appears to stimulate the minute arteries of the part already in a state of over-action. On this principle of excluding the air, the benefit said to accrue from some more modern applications may be readily explained. The greatly extolled cotton-wool, the covering the part with flour or fullers'-earth, or finely levigated lime, all admit of the same solution. As far as my own experience goes, one of the best applications in such cases is fine old cloth, dipped in a liniment of lime-water and oil. The lime, which is held in solution, completely fills up the interstices of the cloth, and effectually excludes the air, whilst the oil renders it so pliant that it may be accurately applied to every surface and cavity. The same effect may be produced by sprinkling the part freely with carbonate of lead, and applying over it cloth smeared with any simple ointment. Whatever remedy is employed, it should be nicely adapted to the whole surface, and not removed for some days.

If these means fail to produce a cure by resolution, vesication will take place to a greater or less extent, constituting the second form or degree of injury from the application of heat. Vesications will sometimes be speedily produced where the heat has been applied during some interval of time ; at other times they follow in a regular train, as consequences of the inflammation which has been excited in the integuments. An important practical question here arises : how are these vesications to be treated ? I do not hesitate to recommend, that, if possible, they should be preserved unbroken for at least forty-eight hours, unless, from their size, there be a risk of their bursting or being broken, and are productive of distress from the tension they keep up. Under these circumstances, they may be punctured with a fine needle introduced under the scales of the cuticle, so as to evacuate the vesicle gradually, without admitting air to the inflamed and de-

nuded cutis, the consequence of which exposure most commonly is extensive suppuration, if not sloughing of the integuments. It is best not to empty the bladders entirely, but to take off the tension from them, and then apply lime-water, or some unctuous substance, calculated to close the aperture and exclude the air. The action of the lime water, or the liniment of lime and oil, is well illustrated by the familiar experiment of dipping eggs in lime-water, which will prevent their becoming putrid for an indefinite length of time, by closing all the pores of the shell and excluding the air.

In the second form of burns, it most commonly happens that some part of the injured surface is denuded of its cuticular covering, leaving a highly inflamed surface, in a state of the greatest excitement, exposed to the action of the air. The great object to be attended to in these cases, is, as speedily as possible, to protect this surface by some application which shall exclude the air. Various unctuous applications have been recommended, but of all those which I have seen employed, and used myself, the most beneficial are the liniment of linseed-oil and lime-water, and the liniment of turpentine and ung. resin. flav. of which latter application I shall presently have to speak more at large, when treating of the third species of burns.

In burns followed by extensive vesications, the constitution will often seriously participate. There will be rigors, followed by fever, and much disturbance of the digestive functions and nervous system, which will call for watchful attention, and require to be treated on those principles which should regulate your practice in all similar cases.

When the surfaces have become exposed, and have ulcerated or sloughed, which will rarely occur if the part be speedily covered and not exposed for many days, the ulcerated surface will most readily heal under the use of cerat. Calaminæ, or ung. Zinci.

I come now to speak of the third and most important kind of burn, or that in which more or less of the integuments and deeper seated parts are deprived of their vitality, either by the immediate violence of the heat applied, or as a consequence of the inflammation which is excited. These cases al-

most always are combined with the two former kinds, as it very rarely happens that the whole force of the fire is expended on any given spot. One part suffers more severely, and may lose its vitality, whilst those in the neighbourhood may be vesicated, or only inflamed. Nothing can be more varied than the aspect presented by severe burns. At one part there may be an appearance of deep red, whilst others are blistered, and a third may present the aspect of an eschar. The appearance of parts entirely deprived of vitality by the action of heat is usually a dirty white, with a semi-transparent look, and often the course of blood-vessels, with dry coagulated blood, may be seen crossing in different directions. Around these dead portions, the integuments have the deepest red, bordering on gangrene, which is gradually lost as you approach the more healthy skin. At other times, when the parts are very deeply destroyed, the eschar has a black appearance, nearly similar to the dry gangrene which attacks the toes of old people. It is often very difficult at first sight to form any correct opinion of the extent and depth to which this destructive process may have gone. As burns are produced by such various substances, whose capacity for caloric is so very different, it follows that very dissimilar results will ensue from their application. The duration of their application, and the peculiar temperament of the individual, will also often modify the extent of injury. All burns of this description must be regarded as most serious injuries, and claim our especial attention. The constitutional symptoms which accompany them are always severe; the extremities are generally cold, and the patient experiences rigors, which recur at irregular intervals, and are, in general, in proportion to the extent, and depth, and importance of the part burnt. Exposure to cold greatly increases these rigors, so that you generally have an opportunity of witnessing this phenomenon when a patient is first admitted into the hospital. The pulse is frequent, and very small. The respiration is often laborious. The stomach is irritable, and rejects food: hiccup ensues, and the patient sinks into a state of coma, in which he often expires in a few hours, or after an interval of from one to two

days. If the patient survives this first stage, he may fall a victim to the symptomatic fever which ensues at any period during the first fortnight. During this period, also, it not unfrequently happens that serious inflammation of the serous or mucous membranes of the viscera takes place, which may claim our greatest attention, and require a treatment very opposite to that which the local injury would appear to indicate. These febrile symptoms generally abate after the first fortnight, and if the case terminates unfavourably after this period, the patient sinks from his vital powers being worn out by copious discharge and continual suffering, and he dies completely hectic.

In the treatment of these serious burns, it is generally necessary to administer some cordial internally, combined with opiates. Whenever the pulse is very small and feeble, the extremities cold, and there exists a disposition to rigors, it will be right to give warm brandy and water, or ammonia, with from 5 to 60 minims of laudanum, according to the age. When the vital powers are not depressed, and the patient suffers much, the opium may be given without the others. Considerable judgment is required in administering cordials. The great advocate for this plan, Mr. Kentish, appears to have entertained some very visionary notions, which are mixed up with his really valuable and practical observations, for which the world are deeply indebted to him. He advises the giving powerful stimuli internally, on the principle of counter-irritation; and he advocates the perseverance in their use for several days, until secretion takes place. It is true that he gives some strong facts in illustration of his plan; but I could produce equally powerful ones to prove, that such a plan is most injurious, and directly opposite to the dictates of common sense, and all the principles laid down for the treatment of inflammation. To adduce one memorable instance in which this stimulating treatment was injuriously persevered in, I will mention the cases of the fire-men who suffered at the burning of Covent Garden Theatre. Several of these unfortunate individuals were admitted into this hospital, and died with every symptom of inflammation of the membranes of the brain and mucous linings of the lungs. The stimulating plan was car-

ried to too great an extent in these cases, as was proved by examination after death. If the vital powers are greatly depressed, you may administer a cordial, and even repeat it until reaction has taken place; but when once that has occurred, it can rarely, if ever, be necessary to persevere in such a plan. When the first stage is passed, light and nutritious farinaceous food should be given, and the bowels gently regulated. Opiates will often be required for some time, to allay pain and irritation. Diarrhœa sometimes supervenes, and is occasionally beneficial where the discharge from the ulcers is very copious. From observing the good effects of spontaneous diarrhœa, when the discharge was profuse, and the rapidity with which the skinning process took place in some cases, Mr. Kentish strongly recommended the use of purgatives under these circumstances, and I have known them very useful. The diarrhœa, however, ought to be carefully watched, as it may arise from a destructive inflammation of the mucous membrane, which may require all our means to control. In the latter stages of large burns, bark and the mineral acids, combined with occasional purgatives, and a nourishing diet, will be proper.

I come now to speak of the local treatment of these cases of severe burns, with destruction of integuments, on which so much has been written, and such a variety of opinions exist. It will be right, in the first place, to remind you, that whatever you employ, it matters not with respect to that part which has already lost its vitality. It is to the parts in the immediate vicinity—those in the highest state of inflammation, and threatening sphacelation, that our attention should be directed; and here I should be wanting in gratitude if I were to withhold the due meed of praise from Mr. Kentish, whose plan, with certain modifications, I have seen eminently successful. It is true that his theories are often visionary; that he has founded his practice on a supposed analogy between the treatment of frost-bitten parts and that of parts in a state of the highest excitement—an analogy which will not bear a close investigation, and in pursuing which he was led into more than one serious error; yet upon the whole, we are indebted to him for many most use-

ful suggestions. An experienced man, unprejudiced by favourite theories, will easily extract the good practical facts, and feel grateful for them, whilst he will smile at the ingenious and amusing hypotheses which were built upon them.

This treatment was founded on the principle of inducing an unity of action between the injured parts and the system, and he divides his treatment into the stimulating and equalizing stages. He recommends the application of stimulants, to excite the absorbent vessels of the injured parts to equal the increased action of the corresponding secreting system. In doing this he forgets that he cannot stimulate one set of vessels without also stimulating the other, which are already in a state of over-excitement. In following up his supposed analogy, and gradually diminishing the stimulus, he advises less stimulating dressings to be applied on the second and third days, even should the patient be perfectly easy. "When the pain has ceased, it will be advisable to desist from the application of the spirit of turpentine and ung. Resin. and employ on the second day, simple digestives and olive oil, and afterwards on the third and fourth, the ceratum Calaminæ." Now this appears to me to be one of the most serious errors into which his theory has led him; as I believe it to be far better practice to allow the patient to enjoy his state of repose and freedom from pain as long as possible, and to leave the dressings, which are applied on the immediate receipt of the injury, unchanged until suppuration be fully established. The patient will be thus rescued from much unnecessary fatigue, and a renewal of suffering which cannot fail to be detrimental, and produce increased constitutional irritation; and the practitioner will be saved, for some time at least, the pain of hearing those distressing screams which, if the subject of the accident be young, he will be obliged to submit to during the subsequent treatment. The plan of treatment which I have been in the habit of pursuing, with very happy effects, has been to bathe the parts with warm spirits of turpentine, and as speedily as possible carefully to envelop every part with linen thickly smeared with a liniment of spirit of turpentine and ung.

resin. flay, as recommended by Kentish. It is better entirely to surround the extremities when burnt, and to retain the dressings in contact with the whole surface with bandages not too tightly applied. The application which has been advocated, and the use of which was revived by Kentish, very closely resembles that which was employed by Hippocrates, consisting of hog's lard, resin, and bitumen. Thus, after the revolution of ages, we find the same remedies are often revived under new appellations, and perhaps with more philosophic views. This application appears very soothing, and the young patient will sometimes cease to cry, and fall asleep as soon as dressed. Having nicely covered every part of the burnt surface with the dressing, and administered a cordial with opium, according to the rules I have laid down, the patient is suffered to remain quiet, and the dressing should not be disturbed for several days—not until suppuration is fully established. If on removing the dressings, deep sloughs present themselves, there is no better application than warm emollient poultices. After the separation of the sloughs, the wounds must be treated like common ulcers, a subject to enter on which at present would occupy too much time.

There are, however, two or three points of practice on which I will for a moment dwell. One has reference to the dressing an extensive burn which has a disposition to throw out exuberant granulations. I have often seen patients put to much unnecessary pain by the whole surface being rubbed over with nitrate of silver, or other escharotics: now this can never be necessary, as such wounds heal only from their edges, and although the skinning process will be often much assisted by touching the edges of the sore with the nitrate of silver, it cannot be necessary to rub it over the whole surface. One of the best applications in the secondary treatment of extensive burns is a bread poultice, moistened with a solution of chloride of soda. The warmth and moisture are very favourable to cicatrization, and the chloride of soda appears to exert a peculiar influence over the cuticle, and to prevent the formation of those hard rigid cicatrices, which so often occur. The other point is with respect to the

days. If the patient survives this first stage, he may fall a victim to the symptomatic fever which ensues at any period during the first fortnight. During this period, also, it not unfrequently happens that serious inflammation of the serous or mucous membranes of the viscera takes place, which may claim our greatest attention, and require a treatment very opposite to that which the local injury would appear to indicate. These febrile symptoms generally abate after the first fortnight, and if the case terminates unfavourably after this period, the patient sinks from his vital powers being worn out by copious discharge and continual suffering, and he dies completely hectic.

In the treatment of these serious burns, it is generally necessary to administer some cordial internally, combined with opiates. Whenever the pulse is very small and feeble, the extremities cold, and there exists a disposition to rigors, it will be right to give warm brandy and water, or ammonia, with from 5 to 60 minims of laudanum, according to the age. When the vital powers are not depressed, and the patient suffers much, the opium may be given without the others. Considerable judgment is required in administering cordials. The great advocate for this plan, Mr. Kentish, appears to have entertained some very visionary notions, which are mixed up with his really valuable and practical observations, for which the world are deeply indebted to him. He advises the giving powerful stimuli internally, on the principle of counter-irritation; and he advocates the perseverance in their use for several days, until secretion takes place. It is true that he gives some strong facts in illustration of his plan; but I could produce equally powerful ones to prove, that such a plan is most injurious, and directly opposite to the dictates of common sense, and all the principles laid down for the treatment of inflammation. To adduce one memorable instance in which this stimulating treatment was injuriously persevered in, I will mention the cases of the fire-men who suffered at the burning of Covent Garden Theatre. Several of these unfortunate individuals were admitted into this hospital, and died with every symptom of inflammation of the membranes of the brain and mucous linings of the lungs. The stimulating plan was car-

ried to too great an extent in these cases, as was proved by examination after death. If the vital powers are greatly depressed, you may administer a cordial, and even repeat it until reaction has taken place; but when once that has occurred, it can rarely, if ever, be necessary to persevere in such a plan. When the first stage is passed, light and nutritious farinaceous food should be given, and the bowels gently regulated. Opiates will often be required for some time, to allay pain and irritation. Diarrhoea sometimes supervenes, and is occasionally beneficial where the discharge from the ulcers is very copious. From observing the good effects of spontaneous diarrhoea, when the discharge was profuse, and the rapidity with which the skinning process took place in some cases, Mr. Kentish strongly recommended the use of purgatives under these circumstances, and I have known them very useful. The diarrhoea, however, ought to be carefully watched, as it may arise from a destructive inflammation of the mucous membrane, which may require all our means to control. In the latter stages of large burns, bark and the mineral acids, combined with occasional purgatives, and a nourishing diet, will be proper.

I come now to speak of the local treatment of these cases of severe burns, with destruction of integuments, on which so much has been written, and such a variety of opinions exist. It will be right, in the first place, to remind you, that whatever you employ, it matters not with respect to that part which has already lost its vitality. It is to the parts in the immediate vicinity—those in the highest state of inflammation, and threatening sphacelation, that our attention should be directed; and here I should be wanting in gratitude if I were to withhold the due meed of praise from Mr. Kentish, whose plan, with certain modifications, I have seen eminently successful. It is true that his theories are often visionary; that he has founded his practice on a supposed analogy between the treatment of frost-bitten parts and that of parts in a state of the highest excitement—an analogy which will not bear a close investigation, and in pursuing which he was led into more than one serious error; yet upon the whole, we are indebted to him for many most use-

ful suggestions. An experienced man, unprejudiced by favourite theories, will easily extract the good practical facts, and feel grateful for them, whilst he will smile at the ingenious and amusing hypotheses which were built upon them.

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The journal of these transactions has, at all times subsequently, been open to every member of the profession—during the summer season at the Infirmary, at other times at my own laboratory. In that journal, p. 1264, the mode of preparing the *Liquor Opii Sedativus* is explained.

The lectures and demonstrations were intended to have been resumed, at the infirmary, on the 27th of May of the present year, in the printed announcement of which is the following paragraph:—"Analyses of several articles of the materia medica, but especially of opium and of the *cinchona cordifolia*, have been publicly conducted. The efficiency of cold infusions, and the superiority of extracts obtained from them, by a heat not exceeding 120 or 130 degrees, has been proved. In conducting or repeating these processes, numerous very concentrated solutions have been obtained, and made available for medical purposes." This intended course was, however, prevented by the unfortunate indisposition of Dr. Farre.

In the first and only number yet published of the "*Journal of Morbid Anatomy*," &c. which appeared at the latter end of last year, I communicated a paper on the analysis of *cinchona cordifolia*, and another on *Barbadoes aloes*, to which I refer.

The mode of preparing the *liq. opii sed.* has been, for some time, in possession of the Royal College of Physicians, and that learned body will make such use of the communication, if any, as it shall deem proper, in the next edition of the *Pharmacopœia* of the college.

I trust, sir, I have said enough to show, that I have not been unfaithful to my pledge, expressed or implied, to disclose my processes to the profession, and to that object I now confine myself, leaving to the reflection of the writer and of your readers, the language and tone in which T. L. has thought proper to address you, and through you, the professional public. I am, Sir,

Your obedient servant,

RICHARD BATTLEY.

No. 114, Fore-Street,
London, 1st Dec. 1829.

MENTAL DERANGEMENT FROM GASTRIC IRRITATION.

By H. WORSHIP, M.R.C.S.

EDMUND —, aged 15, but not yet arrived at puberty, of small stature, but regularly formed, with light-coloured hair, delicate and pale skin, and an active and intelligent mind, was put under my care for an affection of his eyes, which presented the following appearances:—There is in each eye a pencil of red vessels, running from the external and internal angle, and terminating at the margin of the cornea, which is perfectly transparent; the pupil is large and regular; the iris acts slowly and almost imperceptibly when a strong light is admitted to the eye, and the pupil becomes contracted only when the sight is fixed on any particular object; the conjunctiva of the lids inflamed, and there is lachrymation and confusion of vision when an object is regarded for any length of time. The upper eyelid is large from the number and size of its vessels. He has been subject to similar attacks from time to time during the last four or five years, and has lately been under the care of a celebrated oculist, who has advised the application of leeches, and an occasional dose of calomel, to be followed up with senna and salts.

His mother informed me that he was not sound in his mind; and with respect to this point, I made out the following history. About two years since he was the subject of scarlet fever, which ran rather high. He had passed nearly a week in convalescence from the attack, when he was seized with acute pain in the abdomen, followed by purging and vomiting, which continued for some hours. It was then his mind became affected; he screamed, and made such exertions, that he was with difficulty kept in his bed; he fancied he was going to be murdered, and pointed at the imaginary objects which were to destroy him. He would minutely detail many absurd stories, of which he had no memory when subsequently questioned. From this state he passed into one nearly resembling idiotism, and then gradually recovered. Although occasionally irritable, he has had no attack like the one I have just described till within a short time of my attendance,

ner was this attack of so severe a character as its predecessor.

Disregarding, for a time, the affection of the eyes, and bearing in mind the history of the former illness, I was induced to look for the cause of the present relapse in a disorder of the stomach, or some other abdominal viscus. That such a disorder existed, and that the treatment I adopted for its removal acted beneficially on the brain, the following statement will fully prove.

Nov. 3d.—My patient complains of great pain and heat in the head, with confusion of ideas. His pulse is quick and full; respiration short, and principally carried on by the ribs. He sighs continually; his digestion is painful, and his appetite immoderate, for scarcely does half an hour elapse after eating a meal, which would satisfy two persons, when he again calls for food, and eats to a like excess. The tongue is covered with a white fur; the bowels are irregular; the epigastrium is full and hard, and painful on pressure. He was put on low diet, with lemonade for drink; leeches, followed by poultices, were applied to the pit of the stomach on the 3d, 4th, and 8th; the leeches amounted in all to 40. To the treatment just mentioned, my patient added the occasional use of a foot-bath.

Nov. 14th.—His recovery has been as rapid as I could have wished: at the time I am writing, his tongue is clean, his head clear; the pain in the epigastrium no longer exists, and the inflammation of the eyes has quite disappeared; so that, he says, his sight is as good as ever it was.

It will readily be granted that there are many cases in which disorder of the stomach is the exciting cause of pains, and other unpleasant feelings in the head; but that this disorder, (be its character and symptoms what they may), should so far act on the cerebral mass as to produce a derangement of the intellectual functions, for any length of time, or at intervals, is a point which will less readily be believed from the want of facts to substantiate such an opinion. From the history of the first attack, as related to me by the lad's mother, I had already formed my suspicions respecting its cause. In the treatment I adopted when he came under my care, I was farther guided by the symptoms which then presented themselves; and the favourable result which

I obtained has justified me in the plan I pursued. Previously to my attendance, the lad had, unknown to his mother, obtained some leeches, and applied them to his head; the relief he experienced was slight, and of but short duration. The account of the affection of the eyes has been given in detail, that the cure, which was effected by the general treatment, and without local applications, may have its due importance. My object in publishing this case is to solicit the attention of medical men to the influence which gastric irritation possesses in producing disorders of the mind.

Nov. 20, 1829.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

Elements of Physics, or Natural Philosophy, General and Medical, explained independently of Technical Mathematics. In two volumes. Vol. II. Part I. Comprehending the subjects of Heat and Light. By NEIL ARNOTT, M.D. of the Royal College of Physicians.

AFTER an interval longer than we could have wished, a second volume of Dr. Arnott's interesting work lies upon our table. It embraces the subjects of Heat and Light, which are discussed in a very learned and agreeable manner, and enlivened by numerous illustrations borrowed from natural phenomena. The author's style is very copious and ornamental, and the perfection of the eye affords a fit theme for enthusiastic eulogy. We fully agree with Dr. Arnott that “the mind which can suppose or admit that within any limits of time, even a single such organ of vision could have been produced by accident, or without design,—and still more, that the millions which now exist on earth, all equally perfect, can have sprung from accident—or that the millions of millions in past ages were all but accidents—and that the endless millions throughout the animate creation, where each requires a most peculiar fitness to the nature and circumstances of the

animal, can be accident—must surely be of extraordinary character, or must have received unhappy bias in its education.”

There is but little in the volume strictly medical, as the subjects to which it relates scarcely admitted of this. One part, however, we must extract, though it is given as an appendix to the early editions of volume 1. It relates to the annoying, and often most inveterate habit of stuttering; and the suggestions thrown out by Dr. Arnott are ingenious and practical.

“The most common case of stuttering, however, is not, as has been almost universally believed, where the individual has a difficulty in respect to some particular letter or articulation, by the disobedience, to the will or power of association, of the parts of the mouth which should form it, but where the spasmodic interruption occurs altogether behind or beyond the mouth, viz. in the glottis, so as to affect all the articulations equally. To a person ignorant of anatomy, and therefore knowing not what or where the glottis is, it may be sufficient explanation to say, that it is the slit or narrow opening at the top of the windpipe, by which the air passes to and from the lungs—being situated just behind the root of the tongue. It is that which is felt to close suddenly in hiccup, arresting the ingress of air, and that which closes, to prevent the egress of air from the chest of a person lifting a heavy weight or making any straining exertion; it is that also, by the repeated shutting of which, a person divides the sound in pronouncing several times, in distinct and rapid succession, any vowel, as o, o, o, o. Now the glottis during common speech need never be closed, and a stutterer is instantly cured if, by having his attention properly directed to it, he can keep it open. Had the edges or thin lips of the glottis been visible, like the external lips of the mouth, the nature of stuttering would not so long have remained a mystery, and the effort necessary to the cure would have forced itself upon the attention of the most careless observer; but because hidden, and professional men had not detected in how far they were concerned, and the patient himself had only a vague feeling of some difficulty, which, after straining, grimace, gesticulation, and sometimes almost general convulsion of the body, gave way, the

uncertainty with respect to the subject has remained. Even many persons who by attention and much labour had overcome the defect in themselves, as Demosthenes did, have not been able to describe to others the nature of their efforts, so as to ensure imitation: and the author doubts much whether the quacks who have succeeded in relieving many cases, but in many also have failed, or have given only temporary relief, really understood what precise end in the action of the organs their imperfect directions were accomplishing.

“Now a stutterer, understanding of anatomy only what is stated above, will comprehend what he is to aim at, by being farther told, that when any sound is continuing, as when he is humming a single note or a tune, the glottis is necessarily open, and therefore, that when he chooses to begin pronouncing or droning any simple sound, as the *e* of the English word *berry* (to do which at once no stutterer has difficulty) he thereby opens the glottis, and renders the pronunciation of any other sound easy. If then, in speaking or reading, he joins his words together, as if each phrase formed but one long word, or nearly as a person joins them in singing (and this may be done without its being at all noted as a peculiarity of speech, for all persons do it more or less in their ordinary conversation), the voice never stops, the glottis never closes, and there is of course no stutter. The author has given this explanation or lesson, with an example, to a person, who before would have required half an hour to read a page, but who immediately afterwards read it almost as smoothly as it was possible for any one to do; and who then, on transferring the lesson to the speech, by continued practice and attention, obtained the same facility with respect to it. There are many persons not accounted peculiar in their speech, who in seeking words to express themselves, often rest long between them on the simple sound of *e* mentioned above, saying, for instance, hesitatingly, “*e I e think e you may,*”—the sound never ceasing until the end of the phrase, however long the person may require to pronounce it. Now a stutterer, who to open his glottis at the beginning of a phrase, or to open it in the middle after any interruption, uses such a sound, would not even at first be more remarkable than a drawling speaker,

and he would only require to drawl for a little while, until practice facilitated his command of the other sounds. Although producing the simple sound which we call the *e* of *berry*, or of the French words *de* or *que*, is a means of opening the glottis, which by stutterers is found very generally to answer, there are many cases in which other means are more suitable; as the intelligent preceptor soon discovers.—Were it possible to divide the nerves of the muscles which close the glottis, without at the same time destroying the faculty of producing voice, such an operation would be the most immediate and certain cure of stuttering; and the loss of the faculty of closing the glottis would be of no moment.

“The view given above of the nature of stuttering and its cure, explains the following facts, which to many persons have hitherto appeared extraordinary. Stutterers often can sing well, and without the least interruption,—for the tune being continued, the glottis does not close. Many stutterers also can read poetry well, or any declamatory composition, in which the uninterrupted tone is almost as remarkable as in singing. The cause of stuttering being so simple as above described, one rule given and explained may, in certain cases, instantly cure the defect, however aggravated, as has been observed in not a few instances; and this explains also why an ignorant pretender may occasionally succeed in curing, by giving a rule of which he knows not the reason, and which he cannot modify to the peculiarities of other cases. The same view of the subject explains why the speech of a stutterer has been correctly compared to the escape of liquid from a bottle with a long narrow neck, coming—“either as a hurried gush or not at all:” for when the glottis is once opened, and the stutterer feels that he has the power of utterance, he is glad to hurry out as many words as he can, before the interruption again occurs.

“Should the author’s future experience enable him to simplify or render more complete the views of the nature and cure of stuttering, which he has given above, so as to facilitate the cure in every variety of case, he will not fail to publish his remarks.”

MEDICAL GAZETTE.

Saturday, Dec. 5, 1829.

“Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso.”—CICERO.

IMPOSING RESTRAINT ON LUNATICS.

WHEN in a recent number we referred to the circumstance of Dr. Burrows having taken active steps on the supposition of an individual being insane, whom he had not seen, we expressed our intention of postponing any comment on the transaction, in compliance with the request of that gentleman, as contained in his explanation to the magistrates. (See Gazette, Nov. 14.) But as we now find that Dr. Burrows does not himself abide by his own proposal, to delay all discussion till the result of a judicial inquiry be known, we hold ourselves absolved from our voluntary offer, and shall proceed to direct the attention of our readers to the principal circumstances of the case.

The inquiry is not a private one, merely involving an individual, nor is it limited to this particular case, but it concerns the profession, and even the public at large, and its discussion may be regarded as comprehending various questions, as to what is lawful and what is expedient in cases of lunacy generally. The point, be it remembered, is not whether Mr. Freeman Anderdon be or be not insane—still less does it consist in any estimate of the “rhapsodies of an obvious madman,” Mr. James Wells, on this occasion—or of the penetration of the gentlemen of the “Home Department,” who were imposed upon by him—or of the taste of the newspapers in giving his letter a place in their columns—but the question is, was Dr. Burrows right or wrong in

directing his attendants to place under restraint an individual whom he had not seen? When the position is thus broadly stated, the common sense of mankind will point at once to the negative, and the accuracy of this decision is, according to our judgment, in no degree impugned by the various exceptions taken against it by Dr. Burrows. For example: it is argued by that gentleman, that "although medical examination of a suspected or alleged lunatic should always precede, where it is possible, his being placed under restraint, many cases must and do occur where that preliminary is wholly impossible." Of course, the case of Mr. Anderdon is held to have been precisely of this description, as the unsettled and wandering habits of that gentleman "presented an insuperable obstacle to an interview with him."

In order to illustrate these circumstances, the following detail is given:—

"Although still a young man, this gentleman has for several years, without any known cause, estranged himself from his highly respectable relations and connexions, and, shunning all human association, took up his abode in a very obscure disreputable part of Lambeth-Marsh. There he resides in a small, miserable, dilapidated house, with broken windows, and a few iron bars across the lower one. It may be inferred, that he has few visitors; for neither the gate of the fore-court, nor house-door, has bell or knocker. He lives a solitary being, without any servant or inmate. His meals he takes at cook-shops, where the lower orders resort. No one knows when he goes out or will return, or can give any account of his movements.

"Let me here ask, how an interview and medical examination was to be obtained within twenty-four hours with such a character?"—*Times*, Nov. 26.

These particulars are sufficient to shew the existence of what Dr. Burrows himself calls "eccentricities;" but they by no means prove insanity; and therefore would not, in any degree,

have justified him in placing Mr. Anderdon under restraint, even had they been the result of his own personal observation—which, however, they were not. But again; supposing that they had been demonstrative of insanity (and no doubt, taken with other evidence, they had appeared satisfactory to Dr. Burrows), still the obvious question remains, by what means the "attendants" were to gain an interview which were not equally open to Dr. Burrows? It might have been difficult,—it would certainly have been troublesome—but it would not have been impossible; and if Dr. Burrows had seen the patient himself, he would, of course, have stood blameless for giving a certificate of his insanity, if he then found him to be a lunatic.

But it does not appear that any attempt was made by Dr. Burrows to see his patient; he seems to have acted implicitly on the representations of others; and this was a great and fatal error—an error which we will not say cannot possibly be explained away; but in what such explanation may consist, is altogether beyond our ingenuity to conjecture. What proceeding, then, is adopted? Let the Doctor speak for himself.

"No alternative being left, instructions were then given to two of my attendants who had been ordered to meet those gentlemen, and they were directed as to the best and safest probable mode of executing their duty. Their directions were, to exercise every delicacy and caution towards Mr. F. Anderdon; to watch his return home; to accost him at his gate before he got in doors; to tell him candidly for what object they came; and to use no violence, but endeavour to persuade him to permit their continuance with him in his own house till the following morning." (*Ibid.*)

It is impossible to imagine a mode of proceeding more entirely injudicious. A gentleman is way-laid near his house, by two men, who are "candidly"

to tell him that he is mad, and that they are going home with him, to remain all night, and to place him under restraint. Had Mr. Anderdon suffered the keepers to go with him, or done otherwise than he did, by giving them in charge to the police, such fact would have been a much stronger proof of his insanity than any that has yet been made public.

The chief point on which we join issue with Dr. Burrows, is as to the propriety of having taken so important a step on the testimony of others. The doctor expressly states, "I hold myself blameless for acting on the evidence adduced by the Messrs. Anderdon, of their brother's malady;" and he argues that, in courts of judicature, the evidence is received of witnesses who have never seen the supposed lunatic. But the cases are not parallel: the utmost extent to which evidence is so received is this,—a medical man is asked, supposing such and such circumstances to be true, do they shew the individual to whom they refer to have been at that time of unsound mind? To wave the incongruity of a private individual supposing that he can ever be warranted in making the same use of evidence as may be done by a court of law, it would be requisite for Dr. Burrows to shew, that, in a judicial investigation, one might be declared a lunatic without the examination of any medical man who had actually seen the patient—for such, to serve his argument, ought to be the usage of the courts.

But farther than all this, in bringing forward a particular instance, where Dr. Munro and he were allowed to give evidence as to the insanity of a person they had not seen, from the representation of others—the Jury paid so little regard to their opinion, that they gave a verdict in opposition to it. This strikes us as a very important feature of the case, and which ought not to have been

omitted when it was thus adduced as a precedent.

But again, Dr. Burrows asks, if a man be seized with furious delirium, or violent mania, "are the parties suffering, or in danger from his fury, to remain passive?" &c. Now this again is forcing a comparison where there is no analogy. If any one be "suffering" from the "fury" of another, he is clearly justified in doing what is required for his own defence, whether the individual by whom the danger is threatened be mad or not; neither, indeed, does it matter a jot which he is. The restraint is here employed, not because the individual is mad, but because there is "danger." The act is founded on a principle analogous to that which allows any one to defend his life against an assassin: it is, to use Dr. Burrows' words, an act of "the parties" who immediately "suffer," not of an indifferent person whom the "danger" does not affect. There certainly are cases of fever with delirium where the physician directs restraint to be imposed, to prevent the patient from injuring himself, but this is never done except by one who attends and sees the individual; and the attempt to force a comparison between this and the case under discussion, shews the weakness of the argument which appeals for support to analogies so distant.

We know it to be illegal, and we hold it to be inexpedient, that any man should be permitted to impose on another the disabilities attached to insanity upon his own individual judgment; that such power should be vested in any one is adverse to the spirit of the English law, and would be highly dangerous to the liberty of the subject. A man may be restrained if he be furious, or attempts to commit suicide, but this is done merely because he is *dangerous* to himself or others; he is not restrained because he is

mad, for it matters not whether his "fury" arise from insanity, delirium, or passion. He is restrained by those who are with him—that is, by those who "suffer." But he cannot be deliberately placed under restraint by a private individual on the principle that he is a madman, however satisfactory to his mind the proofs of insanity may be. We have offered these few remarks upon the subject because it is a general question, the discussion of which, in connexion with the present case, will put medical men on their guard. There is nothing of which the public are more jealous than any measure interfering with personal liberty emanating from a private source, and it is right they should be so. With regard to Dr. Burrows, we are not among those who have either expressed or entertained any of those injurious suspicions to which he alludes; but we think that, however contrary to his usual judgment, he has erred in this particular instance, and that instead of himself repeatedly coming forward to discuss it, he ought to know that it is better to suffer a false step to be overlooked in the general respectability of his character, rather than thus to provoke criticism by attempting to justify it.

THE LANCET *versus* MR. EARLE.

WHEN, a fortnight ago, Mr. Earle addressed a letter to the Editor of the Lancet, we must acknowledge that we questioned the propriety of the step; we felt it to be a condescension to which the latter was not entitled, and which the former could scarcely practise without derogation. Whatever our views in this respect may have been, however, it is quite obvious that the blow to the Lancet has proved one of overwhelming severity. Mr. Earle's letter was evidently the production of an honourable man, writing under strong feelings of indignation and contempt for the

dishonesty and worthlessness of his opponent. He made use of no circumlocution, no equivocation, no shilly-shally half measures—but went straight to the point; charging the Editor with ignorance and malice, and tergiversation, and falsehood. The blows came down quick and heavy, as those of a sledge hammer; there was no parrying them; and accordingly the letter was sent forth without any other comment than a *promise* of future refutation. After a fortnight devoted to deliberation, hesitation, consultation, and mystification, an answer appeared, presenting a remarkable contrast to the original document; no question which this contained was fairly met—no statement contravened—no allegation disproved—no single solitary point refuted. Throughout the writer is obviously twisting and turning, and equivocating. Indeed it is difficult to say whether he produces the strongest impression against his cause, with regard to those circumstances which he leaves unnoticed, or those which he has attempted to answer.

For example, the notorious fact that Mr. Earle had been repeatedly traduced in the pages of the Lancet—that he had been "persecuted for years,"—was placed by that gentleman in contrast with the altered strain subsequently adopted towards him. Wakley denies all this, and says that Mr. Earle has only been able to adduce one instance in which he has been calumniated. *This is false.* Mr. Earle gave one instance as an illustration "*par excellence*,"—one which contained in it references to others; and then adds, that if the readers of the Lancet require more, they may consult his letter in the second number of the Medical Gazette. Yet, while the Editor of the Lancet denies having injured Mr. Earle, he has the inconceivable stupidity to republish one of the strongest examples of his inso-

lence towards that gentleman, consisting of remarks which betray at once all the pertness of ignorance and all the rancour of the deepest malice. The re-insertion of this article at the present period, is an amusing illustration of the extent to which he writhes, under Mr. Earle's castigation. The comments alluded to were professedly the production of the reporter; but Mr. Weekes, who at that time had the misfortune to report for the *Lancet*, publicly denied having penned them, and even stated that he had remonstrated with Wakley on the subject, who replied, that "his conscience was too tender." The truth of this also Wakley now denies, and we expected nothing less than a *written* contradiction from Mr. Weekes to follow; but not at all. The only evidence adduced of Mr. Earle's falsehood, is an admission that clearly proves falsehood indeed—but not with Mr. Earle. It runs thus:—

"We say at once that this is false. Mr. Weekes did not remonstrate with us; he merely expressed a wish that the "reporter" should not be mentioned in connexion with any remarks upon the cases, as it might involve him in difficulties, and that he was particularly anxious not to mix himself up with medical politics."

Is it possible to imagine that any one could be such a blockhead as to deny that Mr. Weekes had "remonstrated," and immediately to add such a paragraph as this? If the above was not a remonstrance, even taking Wakley's own version of it, then pray what was it?

But Wakley says that the comments were written by a reporter, though not by the reporter of the case. If he kept two reporters (one to take cases, and the other to write comments upon them), why did he not say so when Mr. Weekes objected to such remarks being put into his mouth? That Wakley himself wrote the stuff which he then published under the borrowed cloak of Mr.

Weekes, and which he now wishes to shuffle off upon a nonentity of a reporter, is manifest from this—that, in alluding to it, he unwittingly says,

"It was *our* opinion that the application of the trephine could be of no service to a dying man, and this seems to have been a source of unappeasable hostility to the scientific Henry Earle."

In fact, our opinion as to the application of the trephine occurs more than once; and the circumstance is demonstrative that they were our "comments."

Mr. Earle asserts, that Wakley had expressed to several persons (whom he knew were likely to see him, and to repeat what had been said) an opinion of him at variance with that so often given in the *Lancet*; and in corroboration of this statement, he adduces the names of Dr. Armstrong, who attended Wakley's family—Mr. Fay, his friend—and Mr. MacChristie, his reporter. We observed, in speaking of the subject in a former number, that those over whom Wakley had any influence, would be instructed "to eat up their words again;" but, apparently, he has not succeeded in accomplishing this to a satisfactory extent, for he has not favored his readers with the answer he received from any one of these gentlemen to his application. But even taking *his* edition of the story, Mr. Fay does not deny that he made *some* communication to Mr. Earle of the nature alluded to by that gentleman; he merely says, that he was not "authorized" to do so. Mr. Mac Christie tacitly admits all that Mr. Earle said, except that he did not make use of the particular expression of Wakley wishing to make him (*i.e.* Mr. Earle) "reparation."

Dr. Armstrong's answer is the most guarded of all, and amounts to a simple "*non mi recordo*." "Scarcely," says Wakley, "had the maligner's ink dried upon the paper which contained his accusation, ere that excellent physician informed him, that he had no recollec-

tion whatever of having either heard or communicated *any such words.*" On this we must observe, that the ink must have taken marvellously long to dry, as Mr. Earle did not see Dr. Armstrong till after his letter was published. What he then said was, that although aware that he had spoken with Wakley on the subject of Mr. Earle, yet he did not remember any thing of what passed. On this point we take leave to say, that at the time the circumstance took place, a communication was made by Mr. Earle to the Editor of this Journal, informing him, that Wakley had expressed to Dr. Armstrong—precisely the sentiments detailed by Mr. Earle in his letter. This circumstance, for the truth of which we pledge ourselves, is at once the strongest confirmation of Mr. Earle's accuracy, and of the shortness of the Doctor's memory.

Strange as it may appear, these miserable attempts to take exceptions to particular words and phrases, instead of disproving the spirit of the communication, is all the attempt made to answer any part of Mr. Earle's letter; while all the chief points are left wholly unnoticed. For example:—The allegation of Wakley having at one time habitually libelled Mr. Earle, and subsequently adopted a tone entirely different—*is not answered.* The allegation of his having published and advised the pupils to attend the lectures which he now attempts to ridicule—*is not answered.* The allegation of absurdity in asserting that his gravest statements were made in irony—*is not answered.* The allegation that the reporter of the Lancet had formally applied to Mr. Earle for notes of his lectures—*is not answered.* The allegation that an application was made to Mr. Earle, and refused, for the MS. of a particular lecture, the non-publication of which, Wakley says, was the cause of offence—*is not answered.* The allegation that Wakley's abuse of

Mr. Earle originated not in any thing connected with the discharge of his duty, but solely an idea that he had contributed to a fund for putting down the Lancet—*is not answered.*

The Editor of the Lancet, apparently aware how totally he has failed in his answer, introduces a good deal of vapouring about his "feelings"—his "satisfaction"—his "triumph"—his "pride"—his "exultation"—and sundry other grandiloquent words, winds up the climax of absurdity with an appeal to the "rectitude" of his conduct! As to this last we really cannot speak, never having heard of it before; but if he has one particle of those "feelings" to which he alludes, we pity him when he looks upon the part he has enacted on this occasion—that of a braggart, who talks big while he thinks his challenge will not be accepted, and then sneaks off with a few retiring flourishes—detected, baffled, and exposed.

THE KING'S MEDAL.

THE King's "first medal" has been presented, by the Council of the Royal Society, to Mr. Bell, on account of his "profound researches in the nervous system." The first medal was last year presented to Dr. Prout. Thus have two members of our profession obtained the highest honors in science during two successive seasons. We are proud of this, as reflecting lustre on medicine; but we cannot help asking, would it not be a more substantial proof of the Society's approbation if the medal consisted in something more than the mere name? At the end of three years has Sir Thomas Lawrence not been able to invent a device worthy of so noble a purpose as the patronage of royalty extended to science? Our readers will scarcely believe that no "medal" is yet in existence!

LONDON UNIVERSITY.

We understand that the Council of the London University have abandoned all intention of attaching an hospital to that institution.

HOSPITAL REPORTS.

MIDDLESEX HOSPITAL.

Case of fatal Extravasation of Blood into the Cavity of the Pleura.

AUGUST 25, 1829.—William Murphy, a shoe-maker, aged 21, was admitted into the Middlesex Hospital, under the care of Dr. Francis Hawkins. He complained of having been ill three days, with pain in his left side and a dry cough. His pulse was somewhat sharp, but not decidedly hard, nor full, nor frequent. His countenance was pale and unhealthy, and he stated that, two years before, his leg had been amputated for a white swelling.

He was ordered to be bled to the amount of twelve ounces; to have a blister applied to his left side; to take Hydr. Submur. gr. iv. Pulv. Antimon. gr. vj. and Pulv. Ipecac. o. gr. v. at night; and a draught containing Aceti Scillæ, f. 3ss. and Magnæ Sulphat. 3ss. three times a-day.

Aug. 26.—Very little blood had been obtained from the arm, and it had flowed slowly. It did not appear to be at all inflamed; but the bleeding, he stated, gave him great relief. His pulse was not so sharp, but his skin was hot. His bowels had not been opened.

He was directed to take a Senna draught immediately, and Pil. Scillæ c. gr. v. Opii, gr. ss. every night at bed-time.

After this he appeared to revive, and, to a certain extent, to recover strength; and he complained very little of cough. But his countenance wore the same pallid and unhealthy appearance as before, and he continued subject to occasional returns of pain in his left side, which were relieved several times by blisters and expectorant draughts. He was unable to lie on the right side without uneasiness. Over the whole of the left side there was dulness of sound on percussion, and the respiration was inaudible through the stethoscope; indications which were not observable on the opposite side. He was subject also to nocturnal perspirations, which were checked by small doses of sulphuric acid, with syrup of poppies or tincture of opium, taken at bed-time.

About the beginning of October, he began

to suffer from pain in the left shoulder, which continued to recur at intervals afterwards.

On the 16th of October, it was observed that the left side of his chest was considerably enlarged, and the ribs on that side less moveable than on the other. Although there was little or no protrusion of the parietes of the chest in the intercostal spaces, yet a slight fluctuation could be perceived in the upper part of the chest, between the anterior and posterior sides, on pressing from behind forwards. There was also a slight puffiness of the pectoral muscle, and of the left side of the neck and face. There was no urgent dyspnoea present, nor had the pain and uneasiness in the side increased.

With the hope of promoting absorption, he was ordered to rub over the chest the unguent. antim. tart., which was subsequently changed for liniment. hydrarg., and to take squill and pil. hydrarg., digitalis, and other diuretics.

On the 19th of October the difficulty of breathing had not become greater, nor did it at any time in the subsequent progress of the case become urgent or distressing. The slight fluctuation before perceived in the chest, was now less distinct. The heart's action was felt strongly and solely on the right side of the sternum.

On the 21st, the chief pain of which the patient complained was beneath the inferior edge of the scapula. There was very little cough, and no expectoration.

On the 22d, it was observed that the right side had the appearance of bulging out almost as much as the other; but, on actual measurement a short time afterwards, the circumference of the left side was found to exceed that of the other by an inch. After this, from the increasing weakness and sufferings of the patient, it became nearly impossible to measure his chest.

Oct. 26th.—There was more cough, but the difficulty of breathing was considerably relieved. The patient's bowels, which had hitherto been rather confined than otherwise, were at this time much relaxed.

27th.—The purging still continued, and the urine, which had long been remarkably thick and ropy, and had deposited a vast quantity of red sand, in spite of the alkaline medicines which he was taking, now appeared clear; but it frequently afterwards exhibited the same blood-red appearance as before.

The diarrhoea, which was uncontrollable by opiates, absorbents, and astringents, continued, with little intermission, greatly to reduce the patient's strength. Latterly, there was an increase of cough, and he expectorated curdled mucus, nearly resembling what is considered to be tuberculous matter. The left side had now lost all appearance of enlargement, the ribs of that side, although immovable, being no longer elevated. But

the heart's pulsations were still confined to the right side.

On the 10th of November he died, his strength being apparently exhausted gradually.

On the following day the body was examined.

The left side of the chest yielded, when struck, as little sound as a piece of marble. The right side yielded, for the most part, a hollow sound. On sawing through the ribs on the left side, a considerable quantity of a brownish serum gushed out; and on opening the chest, a mass of substance was disclosed, having at first the appearance of a fungoid growth, which occupied the whole of the left side of the chest, and extended itself even on the other side of the spine, having thrust the heart entirely to the right side of the sternum. At first, it was surmised that the whole of the lungs of the left side had been converted into a fungoid substance, but from the appearance of the mass when taken out, (resembling, when cut into, a mass of coagulated blood in different stages of alteration, disposed partly in layers, and partly in a cellular manner, and not altogether unlike the clot of an aneurism,) as well as from the other circumstances of the case, it was suggested by one of the by-standers (Dr. Harrison), that it must have been blood effused into the cavity of the pleura, a supposition which further examination verified, for the lungs of the left side were found condensed into a very small space against the spine, and the pleura pulmonalis, covering them, was entire, to the external surface of which this coagulum slightly adhered.

Upon examining further the parietes of the chest, a sort of rough cavity was felt in two of the ribs, (about the fifth and sixth.) They were taken out, and the lower margin of each, on the inner side, was found to be destroyed for the space of about an inch near their angle. The intercostal artery belonging to one of them was entire, but under the other, which was most decayed, it was wholly wanting: it had in that part been entirely destroyed. The external surface of these ribs was sound, nor could any trace of fracture be discovered.

The condensed lungs of the left side appeared upon incision to be filled with small tubercles; but this appearance arose from the contracted state of the bronchial tubes, out of which thick mucus could be squeezed, similar to that which had latterly been expectorated.

The lungs of the right side were healthy, except that the bronchial tubes in their upper part felt harder and more cartilaginous than usual, in some places almost bony.

The heart had its right auricle much enlarged; in other respects it was sound in structure.

The liver was immensely gorged with

dark blood, but its internal structure did not appear to have undergone any alteration.

The mucous lining of the small intestines was remarkably attenuated. Although no elevated ulcers were observed, in two places there was found a small round perforation quite through the coats of the intestine, yet its contents did not appear to have passed into the cavity of the abdomen, nor did the peritoneum appear to be inflamed.

No other morbid appearances were discovered.

From the previous history and general appearance of the patient, this case had been referred to the common class of tubercular phthisis, complicated, as it sometimes is, with inflammation of the pleura; an explanation with which many of the symptoms appeared to agree sufficiently well. In fact, when many of the symptoms of a disorder which occurs very frequently are present, the chances are so much in favor of an individual case being of the same nature, that we are often led to consider it as such in a somewhat hasty and indolent manner. The examination of this case, which disclosed the unusual circumstance of long-continued hæmorrhage from an intercostal artery, may serve to show that we can never be too precise and particular in investigating the pathology of a case which exhibits any deviation from the usual combination of symptoms, either through the absence of some or substitution of others.

EDINBURGH ROYAL INFIRMARY.

Lithotomy.

JAMES TAIT, æt. 16, admitted under the care of Mr. Lizars, July 31st.

Last winter he began to suffer from micturition: his urine passed sometimes involuntarily, and in a small stream, attended with uneasiness in the hypogastrium. In the beginning of the summer he felt pain at the extremity of the penis during and after making water, and also in the loins and perineum, occasionally so severe as to prevent him from sitting. About a month ago he passed several small particles of uric acid. Bowels constipated; general health good.

A calculus is distinctly felt by the introduction of the sound. His urine is frequently bloody, and he complains of constant and severe pain in the loins, preventing sleep. His bowels were freely opened in the evening by castor oil.

August 1.—To-day the lateral operation of lithotomy was performed by Mr. Lizars, and a small stone was readily extracted with the scoop. A flexible gum tube was placed in the wound. After the patient had been put to bed, hæmorrhage occurred, but was

arrested by ligature, and the wound stuffed with lint.

4th.—Doing well; bowels rather constipated. Ordered *Ol. Ricini* ℥j. Urine passes by the wound.

10th.—The urine passes naturally; the wound is cicatrising, and the general health of the patient is good.

Sept. 20.—Had acute pain during the night in the left lumbar region. In the morning retention of urine occurred, the urethra being obstructed by a calculus lodged about half an inch posterior to the glans penis. The stone having been pushed forwards, orifice of the urethra was enlarged with a bistoury, and a mulberry calculus of the size of a horse-bean was extracted with some difficulty.

22d.—Still complains of severe pain in the region of the left kidney. A seton was applied in left lumbar region.

23d.—Pain in loins much diminished.

26th.—To-day the patient was sounded, but no calculus could be discovered. He has now slight incontinence of urine, but is otherwise free of complaint.

Hernia Cerebri.

Edmund Young, æt. 18, admitted under the care of Mr. Liston, Sept. 10.

Last night received a kick on the forehead from a horse; he remained perfectly sensible, and did not fall to the ground. Shortly after he was seized with vomiting, which has recurred at intervals. Pulse regular, but feeble; pupils dilated. On the centre of the forehead there is a triangular wound, which extends to the root of the nose: on introducing the finger, the os frontis is found fractured, the lower portion being comminuted and depressed. The trephine was applied, and several detached portions were removed, with some difficulty, from beneath the undressed portion of the bone. A spicula had lacerated the dura mater, and penetrated the substance of the brain to the extent of half an inch; on removing it, a small portion of cerebral matter escaped. The fracture extended apparently in the direction of the right orbit.

Mr. Liston's prognosis was very unfavourable.

In the afternoon the patient's pulse was 64, of good strength, and the pain in the wound had slightly increased. He was bled to ℥xiv.

Rx Tart. Antimonii gr. ii.

Sulph. Magnesiae ℥iiss.

Aquæ ℥xx. ℥j. every hour.

Sept. 11.—Passed a good night. Complains of little pain, but there is a slight swelling of the scalp around the wound. Had an enema, which procured three copious stools; pulse 90, skin of moderate temperature, tongue foul, some thirst.

V. S. ad ℥xiv.

12th.—The pain in the head and the puffiness of the scalp have somewhat increased; skin hot, pulse 90.

V. S. ad ℥xii.

15th.—The pain in the head is more severe. Pulse 96, bowels open. Healthy discharge from wound.

16th.—An abscess having formed over the lachrymal sac, was opened, and a quantity of pus evacuated.

18th.—Was very restless last night; the scalp is tumid, and tender on pressure; pulse 90. The original wound was enlarged, and a considerable quantity of pus escaped. ℥xx. of blood were abstracted; blood buffed and cupped. He afterwards became much calmer, and the swelling and pain decreased. Pulse 110.

19th.—On left temple there was considerable tension and pain of scalp, which was relieved by an incision.

20th.—There is some appearance of fungus cerebri, and a portion of brain seems to have sloughed. An incision was made into a swelling over the right temporal muscle, and ℥viii. of blood allowed to flow.

21st.—Several portions of brain have been discharged; pulse 100, and intermitting; profuse perspiration; bowels open. Had ℥xx. of liquor Sedativus, after which he became more composed.

22d.—The patient is delirious, and a hernia cerebri protrudes, of a sloughy appearance and considerable size. Pulse 142, skin dry, pupils natural. Soon after the visit he became comatose, and died early in the morning of the 23d.

A moderate and uniform degree of pressure had been constantly applied to the wound, by folded lint and a bandage.

Dissection.—The integuments and pericranium surrounding the aperture in the frontal bone were much thickened, and infiltrated with pus and serum. The dura mater, at the wound, was of a sloughy appearance. There was great effusion of purulent matter under dura mater investing the right hemisphere of brain; the corresponding tunica arachnoidea was thickened and opaque, and between it and the pia mater there was considerable deposition of lymph and pus. The fungus was collapsed, of a dark colour, soft consistence, and connected with the anterior lobes; the surrounding cerebral matter was much softened, and mixed with pus. The fracture extended through the orbital plate of the right os frontis, over which lay two small spiculæ of bone; and a similar fragment was situated over the right optic nerve.

WESTMINSTER HOSPITAL.

Diseased Hand.—Amputation.

Geo. Cross, æt. 41, admitted Nov. 17, 1829,

under Sir A. Carlisle. This is nearly a similar case to the one in our last Number. Twenty months ago, in putting up some shutters, he was about to place the bar to secure them; some one who held the other end turned it rather suddenly round, and gave his wrist a slight twist. He attributes the whole of the subsequent disease to this cause, and he does not recollect to have observed that he was much out of health at the time. He took no notice of the sprain for a day or two, when he observed that the wrist was slightly swelled, and he experienced pain, particularly when he was warm in bed. He applied to a chemist, who gave him a camphor liniment. The swelling increased, and the pain continued unabated. He then applied to a surgeon, who ordered him a dozen leeches, and he says he lost the entire use of his hand immediately after their application—for previous to that he could move it about a little and use his fingers, but from that time felt them quite useless. Leeches were repeated frequently at intervals, and after a time a succession of blisters was ordered. The hand remained, as nearly as he can describe, in precisely the same state—equally swelled, painful, and hot. It was then (sixteen months back) opened on the back of the hand, and a small quantity of matter escaped. He was ordered to foment and poultice it, which he has continued doing ever since. Six months back, several openings formed both on the back of the hand and towards the palm and front of the wrist. Several incisions have been made from time to time, by the surgeons attending him. He says no bone or ligament has ever come away to his knowledge.

His hand is at present extended, without any power of closing it, or bending the wrist. There are several openings at different points, which discharge. The bones of the carpus seem unconfined by ligaments. The pain is less than it has been, but his hand is quite useless, and a constant source of irritation and ill health. He is a servant, married, and says he has lived a regular and temperate life, generally enjoying good health. His pulse is extremely feeble, 65 in the minute; tongue pale and clean; bowels slightly confined, and his figure rather emaciated. His appetite has been very bad ever since the accident until within the last month or six weeks.

R Magn. Carb. 3j.

Pulv. Rhei. grs. xv. ft. pulv. v. m. s.

Nov. 20th.—After a few observations by Sir Anthony Carlisle on the nature of the case, the patient was brought into the theatre, and the amputation performed by a circular incision, about four inches above the extremities of the radius and ulna. The radial and ulnar arteries were secured, as also a branch of the profunda. The edges

of the flaps were brought accurately together, and the usual dressings applied.

On making an incision down the wrist and hand into the joint, the whole of the bones of the carpus, the extremities of the radius and ulna, and metacarpal bones, were entirely denuded of cartilage; and all the carpal bones more or less absorbed, presenting sharp and ragged surfaces. The metacarpal bones, in their length, were also more or less diseased, with fungous-looking excrescences growing up from between them, and upon the upper surfaces.

Diseased Penis—Amputation.

John Mills, æt. 55, admitted Nov. 7th, 1829, under Sir Anthony Carlisle. This patient refers the commencement of his disease to about fifteen years back, when he felt slight pain at the extremity of the penis, and shortly afterwards experienced difficulty in drawing back the prepuce. He was living at this time an irregular life; the pain and inflammation continued, and he found it quite impossible to draw back the skin, nor has he ever been able to do so since. He has not, however, been prevented following his occupation (as a gentleman's servant) until November 1828, when he was admitted into this hospital, under Sir G. Tuthill, for asthma; while he was in he was transferred to Sir A. Carlisle.

The treatment since his being transferred has consisted in the employment of different lotions; carrying the dressings down as far as possible; endeavouring to separate the glans from the prepuce; and preventing the latter from closing in, to which there was evidently great disposition. The prepuce was also freed several times by incisions, but with little benefit. It was found impossible to keep the glans exposed. In making the incisions the prepuce next the gland was found quite cartilaginous.

A consultation having been held, it was determined to amputate the penis, which was done on Saturday, November the 14th, by Mr. Harding. The skin being drawn back by an assistant, he began at the upper surface, about an inch from the pubes, and carried the scalpel perpendicularly down, making one clean incision. Three arteries were secured; the stump dressed, and the man put to bed.

Nov. 15th.—He complains of great smarting pain on making water, but is otherwise tolerably easy.

Nov. 17th.—Granulations are appearing on the surface, and the stump seems to be gradually healing over.

Nov. 20.—The stump is looking well, and with the exception of a slight diarrhoea, feels tolerably well in health.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 12, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XL

Suppuration—Abscess—its Treatment.

SUPPURATION, gentlemen, is the formation of a fluid, which is called *pus*; it is one of the effects of inflammation, and therefore whenever we find *pus*, we are certain that there either is, or has been, inflammation in the part. *Pus* is a whitish or yellowish fluid, varying in consistency from that of the thickest cream to that of water; and it is found, on microscopical examination, to consist of globules floating in a thin fluid, in this respect, bearing some analogy to the blood.

The differences in the consistence and other properties of *pus* depend chiefly on the nature and degree of the inflammation, and on the structure of the part in which it is formed. *Pus* is sometimes thick and homogeneous—sometimes it is flaky or clotted—sometimes it is serous or watery—sometimes it is viscid or slimy.

I have spoken to you of suppuration as one of the effects of inflammation; but the formation of *pus* is not confined to the circumstances which were then explained or alluded to. *Pus* may be formed on the surface of the skin—for example, after the application of a blister—it is formed on the surface of an inflamed mucous or serous membrane—on that of an inflamed synovial membrane—on the surface of wounds of any of the soft parts, or of ulcers—and it is formed in consequence of inflammation in the interior, or substance of various organs. When *pus* is thus formed, the collection of fluid which it constitutes is called an *abscess*. An abscess, therefore, is a purulent collection in the interior of any part of

the body, excepting, however, the regular or normal cavities; for when *pus*, or any kind of fluid is formed in them, we call it *effusion*, not abscess.

Inflammation, as I have already informed you, differs greatly, in different instances, in the violence of its symptoms, and in the rapidity of its progress—sometimes going quickly through its course, and at others occupying a long time. The formation of matter in suppuration partakes of the same variety of character which is observed in the inflammation that produces it. You may have *pus* completely formed in an abscess, and fully developed in the course of a short time—two or three days for instance; or you may have the collection increasing and remaining in the part, without coming to an end for several weeks or months; or perhaps even years. We might, therefore, designate suppuration, as we do inflammation, by the terms *acute* and *chronic*; and, in fact, we speak constantly of *chronic* abscess, though we do not use the term *acute*, but *phlegmonous* abscess, to denote those collections that are produced by the more violent and rapid forms of inflammation.

I shall first speak of suppuration as it occurs in a *phlegmonous* abscess. When the inflammation has proceeded to a considerable degree, matter is deposited in the centre of the inflamed part. The inflamed textures, as I have already mentioned, become in some measure softened, or at least the power of cohesion is lessened by the process of inflammation. In the centre of the inflamed part *pus* is formed, and, in fact, portions of the texture lose their cohesion, and may be said to be broken down. When this effect is produced, there is an effusion from the inflamed vessels, which is of rather a thin or serous appearance, and somewhat of a bloody colour. When I say the texture is broken down, I do not allude to a mechanical process, but to a change in the condition of the textures of a part, the result of violent action. We now begin to perceive white spots of matter disseminated here and there

in the seat of the highest action, and these soon unite together, so as to form one cavity. The cavity which is thus formed enlarges, it increases in size, by pushing aside the cellular substance and surrounding soft parts, which yield more or less according to their nature. Now such of those parts as are firmer make resistance, and do not give way—namely, blood vessels, nerves, and tendons. These form elevations or ridges on the side of the abscess, and sometimes they constitute a sort of fibrous crossing, from one side of the cavity to the other. When we examine the part, it is found soft and pulpy, and presents a greyish appearance. If we take the handle of a knife, we can scrape off a pulpy grey substance, which is generally supposed to consist of coagulable lymph, effused in consequence of the inflammatory action. It appears, indeed, not to be organised, although it closely adheres to the surface of the part. When we have thus scraped off this covering, we find that the interior of the abscess presents the appearance of a dense texture, that has been compared, and not inaptly, to that of a mucous membrane: it is reddish in colour, firm and compact in structure, and tolerably uniform. This kind of membranous structure constitutes what we call technically the *cyst*—that is, the walls and sides of an abscess; in fact, if the contents were taken out, the abscess would then present a bag or cyst. The internal surface of this cyst is not connected with the matter which the abscess contains. The external surface of the surrounding cellular membrane, and the other soft parts in which the abscess is formed, are closely adherent, being condensed and rendered preternaturally firm in texture by the inflammatory process. This condensation extends to a greater or less distance round the abscess, till it gradually passes into the natural texture of the surrounding parts. In an earlier stage of the formation of pus, there is a considerable portion of this condensed or hardened substance surrounding the cyst; but in proportion as the collection of pus increases, the surrounding hardness becomes less in extent. The *parietes* or walls, or cyst of the abscess, is obviously occasioned by the consolidation of the cellular texture in the part, in consequence of the effusion of lymph into it. The inflammatory disturbance, which excites suppuration in the centre of the inflamed part, produces the effect of interstitial deposition in the circumference. In the language of Mr. Hunter, “the inflammation in the centre is suppurative inflammation, and in the surrounding parts it is adhesive inflammation.” The cyst thus formed constitutes a natural frame, which contains the pus, and separates it from the surrounding parts. If it were not for this, the pus would be disseminated in the cellular substance of the part in which it is deposited;

and, like serum in anasarca, it might extend over the whole of the limb.

The pus which is contained in an abscess formed under these circumstances is thick, homogeneous, and generally of a whitish colour;—when I say *thick*, I mean it is equal in thickness to the thickest cream, and sometimes so thick that it comes to the consistency of a soft solid, such as butter, and, generally speaking, the higher the degree of inflammation, the thicker is the pus produced by it. This is the kind of pus which pathologists call *good laudable pus*—that is, it is a kind of purulent secretion which is produced by a high degree of inflammation occurring in an healthy individual. This, no doubt, is the reason that has given rise to the term *laudable pus*. The pus thus formed is found to be heavier than water—that is, if it is received into a vessel of water it sinks to the bottom; and this circumstance has been considered as a criterion for judging between pus and mucus. Much pains has been taken to point out the difference between these two; for, under certain circumstances, it becomes a matter of importance to determine whether a certain secretion be the product of inflammation—pus, or whether it be a mucous secretion. Unfortunately, however, no very clear criterion has yet been adduced. Between the purulent fluid that has been found in a phlegmonous abscess, and the ordinary secretion from the various mucous membranes, there are such obvious differences, that we are not in any want of a minute criterion; but I believe no criterion can be depended on for distinguishing fluid that is the product of an inflamed mucous membrane, and that which is the product of suppuration. It has been remarked that mucous fluid generally floats in water, instead of sinking in it; but this is by no means universal. Mucus will sometimes sink in the chamber-pot in urine, although urine is of greater specific gravity than water. Mucus is a ropy fluid, while pus does not present that character. But there are intermediate gradations by which the natural viscosity of mucus in a healthy state passes into a condition which bears a close resemblance to pus.

Heretofore an opinion was held that pus is produced by the breaking down or melting of the natural textures of a part; this idea no doubt arose from a cavity being found in a part where suppuration has taken place,—a notion being entertained that the pus consisted of the natural texture that previously filled the cavity, reduced by some strange process into the form of pus. Again, it has been supposed that pus is formed by some putrefaction or fermentation of the fluids of the part. It has further been contended that pus can only be formed in consequence of the process of ulceration. Thus when pus has proceeded from any of the

mucous cavities by their external outlets, it has been supposed that ulceration existed in them. All these notions have vanished in proportion as correct physiology has advanced, and as examinations have been instituted after death in cases of inflammation. Although considerable controversies existed some years ago on this point, these are now completely settled. It has been supposed again, that pus arises from a deposition in a part, and that it gradually undergoes a change that converts it into pus. Now the truth is, that the sides of an abscess secrete pus, and there is no passing through successive gradations—there is no elaboration of fluid to bring it into pus, except so far as respects the commencement of the process, for there is a breaking down of the textures of the part in the first instance to form the cavity in which the pus is afterwards to be contained. The fluid first deposited has a serous, and sometimes a bloody character, though afterwards we find in the same part a secretion, having all the characteristics that belong to pus. This, however, only applies to the first commencement of the process. The same may be said in cases of inflammation of the cutis or of mucous membrane. We do not find that the pus deposited at first is perfect, but that a serous fluid is poured out from the skin, and this is changed for the fluid that constitutes pus. There is a similar gradual change from the colourless viscid mucous secretion belonging to the mucous membrane, to the thick yellow purulent matter which we sometimes see in high inflammation of these parts. We usually see appearances that lead us to suppose there is something like a giving way of the textures of the part in which suppuration takes place. Some time ago we had a patient here that was sent from the fever hospital, in whom a considerable abscess had formed on the side of the hip. I made a puncture, and let out a fluid that appeared to me pretty much like oil; and I found, when it was received into a vessel, that it consisted of pus and oil floating in it. Seeing it came out together with the pus, I have no doubt it was the oily matter connected with the adipose structure in which suppuration took place. Sometimes there is an admixture of pus with bile. This is the case in hepatitis, where the parts are broken down, and such pus has a kind of yellow hue, derived from the colour of the secretion of the liver.

The surface of an abscess secretes the pus which it contains; and it is also capable of absorbing or taking up again the fluid it has deposited. It has a secreting and absorbing surface; and hence we may regard the cyst of the abscess as a kind of new organic deposition in the part.

With respect to the symptoms of suppuration: when inflammation has been of a violent kind; when it is rapid in its

progress, and there is throbbing pain, we may expect that suppuration will occur. The actual formation of matter in the part is characterized by a cessation of local pain; it becomes less severe, and frequently seems to stop altogether. There is soon, however, a kind of dull aching sensation; there is a feeling of tension; and when the matter is forming, there generally is throbbing. A kind of pulsation synchronous, with that of the heart, takes place in the organ immediately before the formation of matter, and during the time it is forming. At first it is common to have shivering; and this has been in general regarded as one of the most certain signs of the formation of matter in the abscess. Now the truth is, the formation of matter takes place where there are no rigors; and rigors occur where there is no suppuration. Rigors, too, occur in most of the spontaneous inflammations of the body. The most unequivocal evidence, however, of matter having formed in a part, is the soft feel which its presence communicates to the hand of the examiner. When you come to feel the part you are sensible that a fluid exists in it; and if you apply two fingers, making pressure with them alternately, you find that the fluid can be pushed from one part to another, what we call imparting the sense of *fluctuation*. It is often of consequence to ascertain whether there be matter or not; and hence we frequently examine the part carefully to ascertain this point. It is difficult to describe this sensation, and I do not know that it can be done: you will, therefore, only be able to understand the kind of feeling that is communicated by the presence of matter by actually examining the parts where suppuration has taken place. When matter has formed at some depth from the surface, of course it becomes difficult to ascertain the fact. When you examine a part in which the point is very doubtful, it is perhaps not so well to use the fingers of both hands, and press alternately with them, because you often produce a kind of fluctuation where no suppuration has taken place; but if you place one hand upon the part, and then make slight pressure with the other, and if you feel against the hand a resistance, or kind of impulse, you may pretty safely conclude that matter is formed in the part.

When suppuration has taken place, the cavity of the abscess, as I have said, extends itself in all directions, becoming larger and larger. In this extension we observe, of course, that it enlarges most readily in those directions in which the resistance is less. Generally speaking, therefore, the cavity of the abscess enlarges towards the external surface of the body, because in that direction there is less resistance to its full development: or it tends to increase towards the surface of any of the mucous cavities or canals of the body.

This progress of the abscess, however, towards the external surface, or towards any of the natural outlets, does not depend simply upon the circumstance of there being less resistance, for the abscess will sometimes take either of these courses, even although there should be much less resistance to its progress in other directions. Suppose an abscess to take place in the parietes of the abdomen or chest, and to be seated near the surface of the serous membrane lining the cavity, the abscess will, nevertheless, in a majority of instances, pass through the parietes externally, although it may have been covered internally by a thin surface. However deep an abscess may be formed, and however it may be covered externally by unyielding parts, the natural tendency of the process is to remove the parts that are seated between the collection and the skin, and, consequently, to bring the matter to discharge externally, either on the surface of the body or into some of its mucous outlets.

In the progress of the abscess towards the external surface, there is a gradual removal of the parts which intervene between the collection and the surface; here, therefore, a new process is required. So far as we have hitherto seen, we have the inflammation producing the deposition of pus in the cavity of the abscess, and consolidating the textures that environ it, forming a barrier, and insulating it from the surrounding parts. But another, and quite a different process, now becomes necessary. To bring the matter to the external surface, you must have a regular removal by absorption of the parts that intervene between them. The external surface of the abscess becomes thinner and thinner, and the feeling of the fluid becomes more and more obvious. The fluctuation, as it is technically called, is more easily perceived. As this process goes on, the swelling in the circumference of the abscess becomes reddened; at the same time, the central part, where the sense of fluctuation is produced, swells more considerably, and rises prominently on the surface. The prominence often assumes a pointed form, and we are enabled to see the spot at which the abscess will break. This is that part of the process which is technically called the *pointing* of an abscess. When the matter approaches the skin, this becomes red, tense, and shining. As the skin becomes thinner and thinner, this redness becomes deeper in tint; it assumes a livid hue, until at length the skin ulcerates, and then the matter escapes at the opening. If the cuticle covering the ulcer at the part be thick, as in the palm of the hand, you find the matter will elevate the cuticle extensively until it gives way, and the matter is evacuated. A certain quantity of the contents of the ab-

cess escapes at the aperture that is thus made; and although the opening formed by the ulceration of the skin is in general a small one, so much of the matter escapes as to relieve the tension of the part, and the patient is considerably easier than before. The sides of the abscess contract in consequence of this abstraction of a portion of their contents. When a fresh quantity of pus has been secreted, it again flows through the opening, and the size of the aperture becomes more considerable by the extension of the ulcerative process. The opening soon becomes large enough to allow the contents of the abscess to drain away; the sides then gradually contract or collapse, the part heals over, and thus a natural cure is effected. Sometimes, however, where motion is constantly taking place, and also in some instances, where we do not observe the cause, the cavity of the abscess does not become completely obliterated; it is reduced to a small extent, but still there is an external opening from which matter escapes. We find the external opening leads into a small tube, of various extent in different instances; and that small tube, which is the remains of the abscess, and the external opening through which its matter is discharged, constitutes what is technically termed *fistula*, meaning a tube or pipe.

We have next to consider the *treatment* of the kind of abscess I have now described. I have mentioned that the sides of the abscess are capable of absorbing as well as secreting pus; we may, therefore, conclude, that if the process of inflammation could be completely stopped, the pus contained in the abscess might be taken up by the absorbents. Thus the natural cure of the abscess would be effected without the matter being discharged at all. In this way abscesses are sometimes cured without either bursting or being opened artificially. It is, however, not a frequent mode of cure; and certainly, as a *general* rule, we may say that when matter is formed in a part it must either be discharged by the natural process I have now mentioned, or by surgical operation. I think the most frequent examples of cure of abscess by absorption are afforded by venereal buboes. There is a young woman in Magdalen ward in whom a very considerable collection of matter in a venereal bubo has been disposed of in the way I have mentioned—namely, by absorption. She came into the ward with a venereal sore, and the labium pudendi in a state of suppuration; the skin was of a bright red, and very tense. The bubo might have contained an ounce of matter; and, in fact, the skin was so red and tense that I thought it should be opened. Some circumstances led me to postpone it; and when I saw the patient at the next visit, it did not appear to me so large; she felt easier, and I did not then open it. On the

subsequent visit it appeared that the bubo was still farther diminished in size; the redness had gradually gone of; the softness and the fluctuation had become less considerable, and the matter was now entirely removed. Thus a collection of a considerable size had been disposed of in the way alluded to. The treatment has simply been keeping the patient quiet, applying a poultice over the part, and giving mercury in moderate doses.

The dispersion of abscess in this way does not take place often enough to lead us to found on it any general mode of treatment. With reference to that particular object, it may be said that the mere occurrence of suppuration is not a sufficient reason for giving up the employment of antiphlogistic means, which have been previously used to reduce the inflammation. There is often a great deal of inflammation existing, and a great deal of redness and hardness, although no matter is formed in the part; and we often may continue leeching, with the general means that are calculated to lessen the inflammation, although we already see matter formed at one point; and such a course of proceeding will be likely to favour the dispersion of the abscess by absorption. When matter has formed, we may leave it generally to itself, avoiding all those causes that would be likely to disturb the natural process. Thus we should keep the part at rest, and covered with a soft poultice; place the patient on low diet, and pay attention to the general health; and with this assistance we may allow the abscess to go through its own course. It is, however, frequently found necessary to discharge the matter by an artificial opening, and different modes have been taken to accomplish this object. Abscesses have been opened by seton, by caustic, by puncture, or by incision. In discharging abscess by a seton, this has been introduced by means of a steel needle carried through the sides of the abscess, at one point of the cavity, till it has been brought out at the opposite extremity, and the thread has been left in. The opening thus made allows the matter gradually to find its way out by the side of the seton. With respect to a phlegmonous abscess, this plan is inadmissible on account of the irritation it would produce; and, in fact, it is so destitute of recommendation that it is now abandoned. In the mode of opening an abscess by caustic, the prominent part, the thin portion of the skin, has been rubbed with pure potash, and the slough, thus formed, has been allowed to separate, the matter falling out when the slough has been detached; or sometimes, when the slough has been formed a day or two, an opening has been made with a knife, and the matter has thus been let out. This is a kind of proceeding which is not generally applicable; and perhaps the only case in which caustic can be advantageously used is in bubo, where the

skin has become very thin; where there has been a considerable separation of the subjacent parts, so that they are likely to form a slough. I should have mentioned, in speaking of the nature and formation of abscesses, that when the skin has been rendered thin, it not unfrequently happens that the part sloughs, and the matter escapes in consequence of this natural process.

Generally, when we attempt to discharge the abscess artificially, we should do so by the direct means of a puncture, or incision—that is, by making an opening in the collection with a cutting instrument. The common broad lancet has been used for this purpose, but this is not the most convenient—and I think the best instrument is the straight double-edged bistoury. It punctures very easily, on account of the sharp point; and when you have carried it into the abscess, you can easily extend the opening to any size you wish. With this instrument you can easily puncture the abscess equal to the breadth of the blade; and if you wish to have the opening large, you can extend the incision by a slight motion of the hand, as far as you please. If the skin has become firm, then you will generally find it necessary to make a slight incision, in order to let out the matter, and you will find the opening but little bigger than if you make a small puncture. It is not necessary to make a large cut, as some gentlemen do; and still less is it proper to introduce the finger into the cavity of the abscess. I remember seeing a surgeon make an opening, and introduce his finger and turn it round several times, inflicting great torture on the patient, for the purpose of removing the core. In fact, discharge in any artificial way from an abscess, is apt to produce an accession of inflammation in the part; and if, in addition to this, you press or squeeze the part, and use any violence that is not necessary, you of course augment the inflammation still more. For this reason, in general, it is sufficient merely to make the puncture, or incision, and let the matter exude from it by itself. It is by no means necessary to squeeze the part; you are not to consider it a point of importance to empty the cavity of the abscess; for you observe that nature does not do that. She makes a small opening, and a little matter exudes from it; then it is extended by ulceration, and an additional quantity of matter is thrown out by it. The plan she adopts is not to get rid of all the contents; nor is there any advantage arising from it. If it is accomplished by pressing the circumference, there is not only no benefit, but a considerable disadvantage. Having made a puncture, or incision, cover the part with a fomentation for half an hour, so that the matter may be more considerably discharged by the gradual oozing from the sides of the abscess; then apply a soft poul-

tice, which you may continue till the healing process is accomplished.

Now it is of considerable consequence to determine what are the cases in which abscesses may be left to their natural course, and what are the cases in which it is desirable to make an artificial opening for the discharge of the matter. When the collection is near the surface, and when it is seated in an unimportant part, you may leave nature to herself, to do her beat. But there are various cases in which you wish to abridge the period of the inflammation, or to limit its extent; and for this purpose it becomes necessary that you should resort to the measure of artificially opening the collection.

I have stated to you generally, that the matter contained in an abscess gradually approaches to the surface of the body; but when it is deep-seated, and when, in its progress to the surface, it meets with textures of an unyielding kind, it cannot proceed; being resisted in its progress to the skin, it extends in other parts, where less resistance is offered. Thus, when matter is formed under the fascia of the thigh, for instance, which is a very tough and unyielding part, it will be a long time before it makes its way through; but it extends in all directions under the fascia. The abscess becomes larger in size than it would be if these particular circumstances did not exist. When matter is formed deep in a limb, among the muscles, it meets with more or less resistance, either from the fascia or tendons. Under all such circumstances, it is advisable to make an opening as soon as you have assured yourself that matter exists. You would, therefore, open an abscess early if it took place in the fore-arm, or the leg, or the thigh; and more particularly if the formation of matter took place in the palm of the hand, or the sole of the foot. There is such a density of fascia, and an integument so firm and unyielding, that the matter does not come to the surface when it forms in those parts; on the contrary, being confined, it makes its way between the tendons, and produces extensive mischief. You must therefore, as early as possible, open a collection of matter which takes place in those situations; and you must frequently make an incision, when you cannot, by the sense of fluctuation, or by external examination, ascertain that any matter has actually formed. The same observation applies still more forcibly to matter forming about the periosteum; for there the matter is confined by a firm texture, and if it is not let out, it extends to the whole line of the bone. When active inflammation takes place in a part where there is a large quantity of cellular tissue, there the abscess will become considerable, unless you discharge it early. This is the case about the anus and

the perineum; and more particularly in matter forming where there is a good deal of cellular membrane that is covered externally by muscles, as in the axilla, the groin, and the neck. In the neck, there is a considerable quantity of cellular membrane by the sides of the trachea, œsophagus, and about the carotid artery and jugular vein. These are covered by fascia; and it not unfrequently happens that the formation of matter takes place in the cellular membrane deep in the neck, and in consequence of the collection being covered by a firm texture, it has no disposition to make its way externally;—in fact, the matter will descend along the vessels of the neck, towards the cavity of the chest. There is not only this danger, but the patient suffers excessively during the time the matter is forming, in consequence of the large nerves and the important parts that are situated in the neck. Matter frequently burrows under the œsophagus and trachea; and you find active febrile disturbance under those circumstances. I have seen a patient, from matter of this kind forming under the jugular, delirious for several successive nights. Here you must proceed to make an opening as soon as you have obtained sufficient proof that matter has formed.

You will see, under the circumstances I have mentioned, that you are obliged to make an opening for the discharge of the matter, when it is seated so deeply that you cannot have the evidence of fluctuation as to its existence. What, then, is the evidence that convinces you that matter has formed? You must consider the symptoms that have attended the original progress of the complaint; you must consider the pain, and examine the swelling of the part. There is generally, in the formation of an abscess, a swelling of the parts, with serous infiltration, and it is a sign of considerable importance in determining this question. In cases of this kind, when the symptoms are very prominent, and, from the collection of circumstances that I have just mentioned, you have come to the conclusion that matter is probably formed, although you cannot feel a soft place, you are fully justified in making an opening, notwithstanding it sometimes happens that you do not discharge the matter. There is no harm in making a puncture even where there is no discharge. The matter is very deep in the cases I have mentioned, and you may have to penetrate the whole length of the blade; but if the abscess is seated in the neck, you must be chary in the part you select for making the puncture, so as to avoid the blood-vessels.

It is necessary, in cases where the matter lies deep, to make a free opening, because you cut through parts that are in a healthy state, and the sides of the opening will

speedily close by adhesion, and thus the further escape of the matter is prevented. You should therefore make a more free opening, under such circumstances, than if the matter approached nearer the skin. You must not only make such an opening as to prevent the parts from uniting by adhesion after a short time, but you must also put something between the edges; for we find that otherwise they adhere in 24 or 48 hours after the matter has been evacuated. You should also open the abscess as early as possible when it forms in any part of a dense unyielding structure—such as the finger, where, besides the tendons, there is a considerable proportion of blood vessels and nerves (and the process of suppuration occurring in a part highly organized, is always attended with excessive pain.) This rule applies to all formations of matter about the hand and fingers, the pain accompanying such being of the most severe kind, and you cannot too speedily relieve the patient from his suffering. Moreover, as all depositions of matter remote from the surface, in the palm of the hand, are apt to spread, and give rise to subsequent important mischief in the part, you must make an opening even though you are not certain that matter is formed. There can be no risk in the wound inflicted by a puncture; the worst that happens is, that you may make a puncture through the skin without actually discharging the matter.

When matter is seated near any of the great cavities of the body, or any of the large joints, it is proper to open the collection early; not that there may be great fear of the matter penetrating into those cavities, but because there is a risk of such occurrence. The matter itself produces no material effect on the parts; it does not corrode, or act chemically on any textures that come in contact with it. I was almost surprised at finding, in a work published at the present day, expressions which seemed to denote some remains of an opinion of that kind. I have read, within a day or two, of the approach of matter to the skin under the term of *erosion*, in an article which, in other respects, was extremely well written.

Another case in which a collection of matter should be opened early, is where it is produced by the introduction into the cellular membrane of an irritating fluid—such as an effusion of urine, or of fecal matter; more particularly if such effusion still continue. The only way to avert the mischief which will be produced by such an irritating cause, is to make a free and early opening.

When matter forms in certain parts which are of great importance to life, in consequence of their functions—such as in suppuration about the fauces or the entrance of the larynx; and, in fact, in any formation of matter about the trachea or œsophagus—it ought to be opened as speedily as possible.

With these particulars I shall conclude our enumeration of the cases in which it is important to open an abscess early, so as to anticipate the process of nature and produce an external discharge sooner than it could be accomplished by natural means.

In many of the cases to which I have alluded, it will be proper to employ such antiphlogistic means as are calculated to diminish the inflammation, which may be supposed to exist to a considerable degree. In any deep-seated formation of matter which you open in this way, you may, perhaps, apply leeches pretty freely to the part, or sometimes let blood. Thus, if you have a formation of pus, it may be necessary, in consequence of the surrounding inflammation, to take blood from the arm, or apply leeches, and frequently you may combine the two—open the abscess, to lessen the degree of mischief, and employ antiphlogistic means, to prevent the recurrence of inflammation.

CLINICAL LECTURE ON DISEASES OF THE SPINE.

BY CHARLES BELL, Esq.

Surgeon of the Middlesex Hospital, and Professor
of Surgery in the University of London.

[Continued from p. 298.]

You see by these specimens how the bones that have been diseased become united—that granulations of bone shoot from the upper and lower vertebræ, and running together, form an union between three, four, or more of them. The unyielding nature of this bony union throws the flexion of the spine on the parts above and below the exostosis, and one cannot but apprehend that the united vertebræ may be fractured. I had a case in the hospital very much like fracture, produced from this cause. You will observe that the spines of old men, like those of old over-laboured horses, are sometimes joined in this manner by ossification. A poor man in this condition had a weight fall upon his shoulders, which broke the spine, making a fracture across the new splint of bone.

Let me read this short note of a case, and I am sure it will frighten you with the possibility of fracture occurring.

A little boy attends the hospital as an

out-patient, who has a curvature of the spine forwards; the angle is at the fifth dorsal vertebra, and is very acute. It has existed for eighteen months, and has been gradually getting worse; yet he runs about—he has had no paralysis of the limbs—indeed he boasts of being an excellent player at leap-frog, or, at least, he is sought after by his companions to leap over, from his accommodating position.

This poor neglected boy, in his play, tumbles heels over head. Now, although there is in general some strange instinct which limits the exertions of a patient whose bones or joints are insecure, and spontaneous exertion is therefore generally safe, yet one cannot but apprehend danger to the spine, bent down to an angle as this boy's is, from such rude exercise.

Even the practice of an hospital, with private study, will not enable a lecturer to give a fair statement of the opinions of the day. I find in private practice, with some surprise, that issues are laid aside in this complaint. Now although perfect rest, and such remedies as will remove a scrofulous diathesis, are the means to be especially trusted to, yet a well managed issue is a good thing. Its use was established by the practice of Mr. Pott: the *rationale* is right, and I confess to you that we seem running sometimes in a circle, making no progress, from having too little regard to the opinions and practice of the last age.

John Dale, æt. 27, was admitted on June 16th, with a large swelling, situated above the anterior spinous process of the ilium, on the right side; and a projection of the vertebræ at the lower part of the spine.

He gives the following history of his complaint:—When he was 13 years old, he fell from a horse and injured his back; nine months after this fall he began to have a weakness in his loins; he could not hold himself erect, but had to walk with his hands resting on his knees. He was for seven months under Mr. Cline at this time, and it was observed that his spine projected at the lower part. In four months more he was able to walk about with ease, and he continued well for eight years. At the end of that time he began to experience the same pain in his back and distress in walking; he accordingly applied at this hospital for relief, where he remained for some time, and had issues placed in his back. Having left this hospital, he remained free of any complaint till five weeks before his readmission, in June last; he then was alarmed by finding a large tumor, twice the size of the fist, forming just above the spine of the os ilii. This was lanced five different times, and evacuated a great

deal of matter; the orifice was healed each time after these operations, but at length the abscess burst of itself, and it has continued discharging matter, frequently to the amount of a pint a day, ever since that time. He has suffered from hectic fever twice during the time he has been in the hospital, and was very dangerously ill; but at present the discharge from the abscess is becoming somewhat less, and his strength is improving greatly.

The spinous processes of seven vertebræ at the lowest part of his back are prominent; the second or third lumbar appears to be the one which is most prominent, or that which forms the angle.

In this case you have that combination, for which you will always be prepared, of lumbar abscess with carious vertebræ. I shall not detain you with any observations on lumbar abscess; but shall say a few words on the cause of the paralysis in diseases of the spine. Two facts are here essential: first, that the paralysis of the lower extremities precedes the sinking of the vertebræ; and, secondly, that the muscular power of the limbs is recovered, although the distortion remains very acute. The paralysis is not, as you would imagine it, the effect of pressure of the bones, but a consequence of the inflammation of the spine affecting the spinal marrow. This, at least, is consistent with the instances which you have had to-night, where the patients preserved the same posture, whilst the weakness of the lower extremities and the power of propelling the urine varied with the circumstances of the case. This also tends to explain that very curious circumstance of a patient having the power of moving the limbs remarkably diminished, whilst he retains, in an almost natural degree, the sensibility of the integuments; for, undoubtedly, the destructive process that is going on in the bodies of the vertebræ, may be presumed to injure the anterior column of the spinal marrow more than the posterior. However that may be, I must state what you will find in practice. A child, which was formerly running about, is again obliged to be put on the mother's knee; and she tells you that the legs and thighs which were firm, enabling the child to stand upon her knee with little support, are now loose, soft, and flabby: the muscles have a woolly texture, as it were. Perhaps the patient may be farther advanced; he may be a boy at school, for instance, and the feebleness in his leg

is first shown by his frequently tripping and stumbling. The commencing paralysis of the legs is not exhibited in actual want of strength, but in the defect of the adjustment of the different classes of muscles, and consequently the want of power of accurately directing the toes to the ground. When these symptoms draw attention, and the spine is examined, there may be no remarkable curve in the back, yet there will be a tenderness in the bones, and a puffiness of the integuments over the diseased vertebræ. You will attend particularly to this state of the integuments. It arises from the same cause, and is of the same nature with that colourless tumefaction in the skin which prevails in scrofulous inflammation of the joints. The state of the integuments over the diseased vertebræ indicates the condition within: when the disease is progressive, the tumefaction obscures the knobs of the bones; when, on the contrary, you feel every process of the vertebræ distinctly, it is a fair harbinger of the favorable termination of the complaint.

But since I have spoken of the disease in childhood, be careful not to be thrown off your guard here, and mistake for the effects of scrofulous disease of the spine that *partial* paralysis which affects children. This is a very obscure part of pathology. It is not the subject of to-night's lecture; yet let me state, though shortly, emphatically, that it is a very frequent source of mistake in practice. In adults, also, you have paraplegia; where it is very natural to suppose the spine is the cause, from the muscular power being cut off at an accurately defined line. In examining the trunk, when you press at that part which is just at the limit of the sensible and insensible parts, the patient is apt to say he has pain in the vertebræ. Be on your guard against deception here, and remember, that the lower parts of the body may be alone affected, while the disease is in the brain. When you suspect this, you not only inquire for such symptoms as pain in the head and affection of the eyes, but attend very particularly to the motions of the arms. The patient may move about his arms and shoulders, and say he has perfect power in them; and yet there may be a defect of motion visible, as in his manner of writing, or in a want of due correspondence between the motions of the finger and thumb.

This subject is very extensive, but there is one circumstance more that I shall touch upon. You must have observed in one of the cases that the child suffered pain in the side when the shoulder was pressed down, and in truth it is not an unfrequent occurrence to find a patient with curvature of the spine distressed with pain in the lateral and anterior part of the chest. You will be careful to observe whether this symptom does not arise from the pressure of the vertebræ against the ganglions of the nerves. There is a preparation before me which shows how much the foramina for the exit of the nerves from the spinal tube are diminished on the contracted side. Both in the lateral curvature and the scrofulous disease of the bodies of the vertebræ, this is a symptom worthy of your attention; lest believing these pains to have an inflammatory origin, you may be prompted to use means to remove them which shall only the more distress the patient, and reduce his strength.

We have been drawn so far into a complete lecture on the injuries of the spine by the necessity of attending to those occurrences in the hospital which you have witnessed, that I shall not touch upon the subject again in the present session, but proceed to explain some specimens in my hands, and to notice some cases, although they have not occurred in your time. It is probable that your professor of anatomy has explained to you that the structure of the bones of the spine is very light and delicate, and that the vertebræ would not, in fact, be capable of sustaining the pressure they are subjected to, were they not held together by universal coverings of ligaments, and by the elastic intervening cartilages, which, by their resiliency, break the force of the shocks that would otherwise fracture the column. It is apparent too on the consideration of the anatomy, that the vertebræ of the neck have a freer motion on each other than in the other parts of the spine; that their motions are less checked by the forms of their processes; that the strength of the column here results more from the ligamentous bindings, and that these are therefore more complicated. This remark applies particularly to the motions of the head upon the atlas, and of the atlas upon the vertebra dentata.

It has been a question whether there can be such an accident as a true luxa-

tion or dislocation of the vertebræ. We have in the first case seen that the vertebræ of the neck may be dislocated to the extent of bruising the spinal marrow, and destroying its function; and I have had an instance of dislocation of the lowest dorsal from the highest lumbar vertebra, in which the spinal marrow was completely torn across. In that case, the strength of the ligaments tore up the shell of bone to which they were attached, so that some might affirm it was a combination of fracture and dislocation. We must distinguish, however, such a case from the fracture of the bodies of the vertebræ, which is a very common occurrence, in consequence of violence crushing down the spine. But I wish you to attend to the accidents occurring at the highest point of the column. I shall not even enumerate the ligaments that hold these bones together and check their motions (which, however, form a very beautiful mechanism, well deserving your attention); I shall merely remind you that, as ligaments are peculiarly subject to scrofulous disease, so are these; and that, when they become inflamed, they soften and relax so as to give way and permit dislocation. It is this which makes it dangerous to play with children in a manner to bear rudely on these ligaments. I dare say you know the way in which thoughtless young men will take a child up by the occiput and chin, and swing him: so common is this practice, that there are some words used while doing it, in different countries; such as, "Now, my boy, I shall shew you London;" or "I shall shew you your grandfather;" which latter I deem the more appropriate phrase, as such rude play may suddenly introduce the child to his ancestor! You will find this case related by the celebrated Petit. A child is stated to have run from one shop into another, in Paris; where the good-natured, foolish shopman, took him up in this playful manner, and after swinging him a little, saying "qu'il allait lui faire voir son grand-père," set him down upon his feet, —when, behold, the child was dead. It happened, singularly enough, that the father of the child, a saddler, coming suddenly in upon the scene, was so enraged that he threw the hammer used in his trade at the unfortunate shopman, and struck him on the back of the neck, between the first and second vertebræ, producing instant death: a singular kind of retribution,—more

illustrative of the surgical point than according with our sense of justice. You are aware of the circumstance which gives tenfold importance to this part of the spine—that the spinal marrow here does not merely command the voluntary motions and sensibilities of the body, but the respiration and expression also: so that death from an injury of this part occurs with frightful suddenness—there being neither struggle nor cry of anguish, nor expression of any kind. But it is not from scrofulous weakness alone that there is danger: I have seen two instances of sudden death, from dislocation of these vertebræ, in consequence of venereal disease extending from the throat.

Whilst such occurrences as these must not be forgotten, I have to shew you some specimens which evince facts that appear at least in singular contrast with them. A man was brought into the Middlesex Hospital, in a state of insensibility, those who brought him stating that he had fallen from a height. The appearance of the head did not indicate any violence inflicted there, but towards the next morning he expired. I hold this singular specimen in my hand. The margins of the foramen magnum of the occipital bone were driven up into the cavity of the skull, and here they are. The portion of the occipital bone, you perceive, is attached to the atlas by ossification; and the atlas is, in the same manner, ankylosed to the vertebra dentata. The specimen, then, exhibits ankylosis of the head to the vertebræ, and of the vertebræ to each other. You see, too, that the vertebræ lie obliquely, and that the ring for the transmission of the spinal marrow is encroached upon in a remarkable manner*. After the discourses you have had, these appearances are to you the indications of

* We subjoin a more minute account of the preparation after examining it in the museum. The atlas is united to the occipital bone, without there being any displacement of these bones: the dislocation has been altogether between the atlas and the dentata, which are firmly united together. The left articulating process of the atlas has been pushed forwards to the extent of very nearly an inch beyond the corresponding articulating surface of the dentata, and has become united to the fore-part of the body of the dentata. The articulating processes on the right side preserve their natural relations pretty nearly: the atlas on this side being only a little advanced before the dentata. The consequence of this shifting of the left articulating process of the atlas is, that the ring formed by the occipital hole and the atlas together does not correspond with that of the dentata: the posterior margins of the foramen magnum and of the circle of the atlas lie across the very centre of the

injury and violent inflammation at a former period; and they are proofs how much this very part of the spine may be deranged, and the spinal marrow retain, or at least resume, its function.

We may incidentally observe, that the loss of elasticity by this defect of the natural structure of the vertebræ, probably gave force to the shock against the head, which caused the fracture of the cranium. We may observe, too, that the injury may have been produced either by the man falling upon his head or on his feet, or breech. If the servant-maid wishes, for example, to fix the broom upon the broom-stick, she is but an awkward wench if she attempt to thrust the head of the brush upon the shaft with her hands—but she takes the shaft in her hand, and striking the end smartly upon the pavement, she more effectually fixes it; for the head of the brush being interrupted in its rapid descent, the shaft is wedged into it. So will a person, falling upon his feet, have the spine, you see, wedged into the skull: and here you have a proof, amongst many which I offered you in the physiological lectures, of the happy adaptation of the natural and perfect spine to support the head without a jar, from observing the consequence of the defect of its structure.

But I take another specimen in my hand—a better proof still of the violence the parts may sustain here without death ensuing; and which, indeed, when I present it to you, must appear something like the puzzle of steel rings upon a rod. How is it possible that these two vertebræ, the atlas and den-

tata, should thus stand one before the other, soldered together by new bone, presenting two horizontal rings? How came these rings to stand thus, on the same plane, without the spinal marrow being torn asunder?—for not only was the spinal marrow not torn asunder, but the man survived the accident for six or eight months. I must observe, that this specimen has been presented to me by our medalist, Mr. Phillips; who, in procuring it, evinced that early ardour of investigation which has been so happily followed by severe application to study in this place.

The patient was 34 years of age, a farmer's servant, and a strong muscular man. Being employed in forming a hay-rick, he fell headlong from the top, the height of sixteen feet. He was at first stunned by the fall, afterwards he complained of severe headaches. He had no paralysis, and was soon able to leave his bed. The surgeon who first attended him bled him twice, and gave him purgative medicines. In the course of a month, as he was not getting better, he left his village, and became the patient of another surgeon. There was at that time an appearance of enlargement about the second and third cervical vertebræ; the patient could not bear to move his head; he complained of severe pain at the back part of his head, and there was some diminution of the sensibility in the upper extremities. Leeches were repeatedly applied to the back of the neck and the occiput, and he was laid on a firm mattress without a pillow, his head being kept at rest. In the course of a month or six weeks, there being little amendment, the surgeon directed an issue to be placed on the situation of the enlargement of the vertebræ, and another on the occiput, and he took the liquor potassæ. At the end of another month the sensibility of the chest, and of the upper extremities, seemed more impaired, and his deglutition was impeded. These symptoms continued during three months, with alternate aggravation and remission: at the end of which time the difficulty of swallowing was increased to an alarming degree, and his breathing was also affected. He had an attack of pleurisy, for which he was bled two or three times. About a fortnight after recovering from this attack, symptoms of general dropsy came on. Erysipelas appeared near the situation of the issues; the powers of life were reduced extremely low, and he died with the symptoms of hydro-thorax. Much difficulty was

tube or ring of the vertebra dentata, thus closing up exactly one half of the canal. A process of bone,

about three-quarters of an inch long, extends forwards from the fore-part of the processus dentatus to the surface of the atlas, on which it had formerly been articulated. A common-sized pencil can only be passed from the occipital foramen down into the canal of the vertebræ.

experienced in procuring the portion of the spine for examination. There was no appearance of injury to the medulla spinalis; the passage of the pharynx was almost closed by the projection of the atlas into its cavity.

The only explanation of this preparation seems to be that the posterior part of the atlas being broken off, and remaining attached to the edge of the occipital hole, the lateral and anterior part of the hoop of this bone was forced forwards, and then the occiput sank down upon the second vertebra. The separation of the first vertebra into two parts allowed the occiput to sink down on the vertebra dentata, and the two ends of the anterior portion of the atlas coming in contact with the fore-parts, the body of the vertebra dentata united with it by ankylosis, so that the body of this second vertebra has one ring, its own proper one, projecting behind, and another attached to its fore part. The spinal marrow did not suffer by this shortening of the tube, as we have seen it did in the oblique shifting of one bone upon another.

I shew you another specimen, where the upper vertebræ are run together by ankylosis, but unaccompanied with any twist in the spine. What is remarkable, and yet might have been expected here, is, that between the third and fourth vertebræ the articulation has been more free than is natural; the processes have been absorbed, and have adapted themselves so as to admit of a greater extent of motion between them, proportioned to what was lost by the ankylosis above. This I can only tell you was taken from a very old man, who died from strangulated hernia. I am inclined to believe it to be of that class of diseases of the spine which I have already noticed as peculiar to old age; and it may have some resemblance to the poll-evil in horses, though not arising exactly from the same cause; for in them I believe the injury at the occipital joint is caused from the powerful operation of the reins on the long head, which is as a lever, while suddenly checking the animal.

On the whole then you see, that an accident to the upper vertebræ of the neck may bruise the spinal marrow, and cause death as suddenly as when an animal is pithed, and that when disease takes place slowly in these vertebræ, the spinal marrow is protected from the communication of the disease

by the sheath, that sheath being strengthened in a remarkable manner by the fibrous and ligamentous substance which comes down from the margin of the foramen magnum and the basilar process of the occipital bone, and goes like a funnel into the tube of the vertebræ. When these ligaments, however, are weakened by disease, dislocation and subluxation may take place. Those of you who come from sporting counties may, perhaps, think yourselves familiar with the case of dislocated neck. The jockey when reining in, after passing the winning post, brings the horse into a motion like the leaping of a deer, and it is then scarcely possible to keep the saddle; the boy is thrown, and lights upon his head, and is taken up with his head hanging upon his shoulder. They set about reducing the dislocation, by putting their knees upon his shoulders, and drawing upon his occiput and chin. But should he happen to recover during this operation, or soon after it, it has still nothing to do with dislocation: it is a case of concussion, and the recovery does not result from the operation. Luxation of the head is fatal.

But subluxation may take place without death. This is a consequence of twisting the head round, as in looking behind you, and the articulating process of the atlas escapes from the corresponding surface of the dentata. It is difficult to resist the temptation to reduce such a displacement, but we have very high authority against the attempt of reduction. A surgeon of the Hôtel Dieu, against the authority of Desault, on a child being brought to him with its neck twisted, took it from its mother's arms, and set about reducing the subluxation,—when the child suddenly expired. If a child have disease of these higher vertebræ and their ligaments, the unhappy mother is much to be pitied. The child is fretful, and crying continually. When laid in bed, the inflamed articulations are twisted by the position of the head: however carefully he may be lifted, there is still a motion in the neck, and his screams are redoubled. I have found nothing better than forming a collar, which shall fill up all the inequalities between the shoulders and the ears, and between the breast and the chin, so that the child shall be swaddled like the infant of an Indian woman. This alone gives a check to

the motions of the head upon the neck, and, with a seton drawn under the occiput, affords some hope of cure; when you may once more see the extent to which the diseases of these parts may go, and life be saved.

I am now more free to recommend you books, as you can, after lecture, retire into the library with every comfort and convenience. For these subjects consult Mr. Pott's works; Sir J. Earle's; Mr. Brodie's; a paper in the *Transactions of the College of Physicians*, by Dr. Baillie, on Paraplegia; and the works of Dr. Abercrombie. With regard to the accidents at the upper part of the spine, consult Boyer, and an excellent and circumstantial paper by Mr. Lawrence, in the *Medico-Chirurgical Transactions*. For the first subject which we have treated of, you will find Mr. Shaw's works the best to consult.

SUCCESSFUL LIGATURE OF THE CAROTID ARTERY,

For Sloughing in the Throat, with Hemorrhage.

To the Editor of the London Medical Gazette.

SIR,

THE following case occurred to me a short time since in practice: it appears to me of sufficient interest to lay before the professional public. Will you, therefore, oblige me by giving it insertion in your *Journal* at your earliest convenience.

I am, Sir, yours, &c.

J. LUKE.

1, Broad-Street Buildings,
Nov. 20th, 1829.

T. B. ætatis 45, a tall, rather muscular man, of sanguineous temperament, captain of a coasting vessel, trading between Cornwall and London, while in the former place, was stung by a wasp on the wrist, which became much inflamed, attended by a pustular eruption around the part. Livid red blotches, about three days after the sting, appeared on the trunk and extremities, with fever, neither of which created any alarm. With these upon him he went on board his vessel, bound to London. On his passage he had the misfortune to take cold, and was affected with sore

throat, requiring confinement to his cabin. In a week he arrived in London, much worse, at which time he was visited by Mr. Gayton. The soreness, however, increased, and the difficulty of swallowing was very considerable. He experienced much pain, particularly in the left side, where he was convinced a "gathering" had formed. His opinion was confirmed on Sunday, Sept. 27th, by the bursting of an abscess, with partial relief. Together with the matter he passed about six ounces of blood by the mouth. He was still sensible of another gathering lower in the throat than the first, on the same side; and exhausted as he was by disease, he began to entertain apprehensions for his safety. On Sept. 29th he was brought on shore, and took up his residence with a friend in the neighbourhood of my house. On the eve of this day, the second abscess burst, and shreds of slough came away with the matter: by this he was much relieved, and slept the greater part of the night.

Sept. 30th, three weeks from the commencement of his illness, I was called to him about 4 o'clock in the morning, in consequence of his having lost a large quantity of blood. He had been awake by something flowing from his throat, which proved to be blood. When I arrived he had already lost about half a wash-hand basin full of blood; and shortly after he vomited more than two pints of coagula, making altogether between four and five pints lost in about half an hour. I found him in the greatest state of exhaustion; his pulse was scarcely perceptible, and very rapid. There was extreme paleness of the lips; the eye sunk in the orbit; a clammy sweat upon the skin; inclination to vomit; and he could not speak louder than in whispers. On attempting to examine the throat, I could see nothing behind the soft palate, to which were adhering shreds of coagula. In a short time he began to revive, and his pulse became more perceptible. Ordered one grain of the acetate of lead, with a quarter of a grain of opium, every two hours; goulard lotion, with equal proportion of spirit, to be applied to the throat; the head to be elevated on a pillow, to be kept perfectly quiet, and abstain from swallowing as much as possible.

12 o'clock.—The faintness has gone off, and he is much revived. He com-

plaints of thirst, and of pain of his left shoulder and elbow, which, however, may be pressed without inconvenience. The wrist is still inflamed. Ordered to continue as before directed, and to use a lemon to quench his thirst.

Oct. 1st.—Has slept soundly after taking fifteen drops of liq. opii sedativus, and is improving in appearance. The blotches are still visible in various parts of the body, resembling the remains of bruises, which he states they were like when they first appeared. They are not painful, nor raised above the surface. The disease has been clearly the *purpura hæmorrhagica* of Bateman. Ordered to continue as before, and to take a small quantity of beef-tea.

Oct. 3d.—About 4 P.M. I was again called; bleeding had returned, but had ceased before my arrival. In about a quarter of an hour he had lost between three and four pints of blood: his pulse, however, was not much reduced in strength, nor increased in frequency, nor did he appear much exhausted. He spoke in whispers, and complained of the throat, and pointed to the left side of the os hyoides as the seat of pain. From this part, during the bleeding, he felt a jet issue into the throat: Ordered to continue the acetate of lead and opium, and in addition half a grain of powder of digitalis every two hours.

Oct. 4th.—At 4 A.M. bleeding again returned. From the account I received I expected to find my patient dying or dead. I found him in the greatest possible state of exhaustion; faint to nausea; the pulse with difficulty to be felt, and very rapid; the breathing laborious, and extreme paleness of the countenance. He was sensible, but apparently indifferent to surrounding objects. He had lost at this bleeding more than three pints of blood. It seemed almost certain that he must die. After a short time, however, he began to revive; the pulse became more distinct, and breathing more free, but the powers of life were so far reduced that another bleeding would inevitably prove fatal. I therefore determined to tie the carotid artery on the left side, that being the trunk which the circumstances of the case indicated to be the source of the bleeding vessel. To obtain the advantage of day-light, the captain was seated on a chair near a win-

dow. Before, however, he was arranged for the operation, his face became convulsed, the pupils of his eyes dilated; his head fell upon his shoulders; and his pulse and respiration ceased. In this state he was hurried back to bed, with the impression upon my mind that he was past hope. A few minutes shewed that he had only fainted, and he soon revived. His head was then laid over a pillow at the foot of the bed, and as the room was dark, I was obliged to proceed by candle-light. An incision, of about three inches through the skin, exposed the platysma hyoides, which was divided along the inner border of the sterno-mastoideus muscle. This being drawn to one side exposed the omo hyoideus crossing the sheath of the vessels, which was then cut through. The carotid could be very indistinctly felt pulsating in its sheath, into which last I made a small opening; a director was then introduced to detach the artery from the accompanying nerve and vein. This being done, a needle, armed with a double ligature, was carried around it from the outside, without bringing into view either the nerve or the vein. The ligatures were separated, and tied about half an inch apart, and the wound closed with plaister. On being questioned, he said he did not experience any unusual sensation when the ligature was drawn tight. His pulse was very weak, and beating 120 in a minute. The pupil of the left eye more dilated than the right. He was kept in the same position as during the operation, except that his head was not so much extended. Ordered beef-tea and light drinks.

11 A.M.—Is a little revived, and has been tranquil since the morning. Pulse 110, and weak; breathing natural; skin warm; the tongue dry; and there is thirst, but he is free from pain. Ordered to continue the beef-tea, and use lemon to quench his thirst.

8 P.M.—Has slept since the last visit, and is going on well.

Oct. 5th.—Has slept well through the night without medicine; pulse 100, and stronger; the colour has partially returned to his lips; his spirits are better, and confidence of recovery increased. He complains of a slight numbness extending over the forehead. The bowels have not been relieved.

Oct. 6th.—The numbness has left the forehead, the pain of the throat

has subsided; and he swallows without much difficulty. He is improved in strength.

Oct. 7th.—The wound was dressed, and found to adhere for half its extent. He has been feverish and restless during the night, and his sleep disturbed by dreams. In the evening, he spat up about an ounce and a half of saliva, tinged with blood, by which he was considerably alarmed. His bowels have not been opened since the operation.

Ordered a draught of infusion of Senna and Sulphate of Magnesia immediately. ℞j. Infusion of Roses, and gtt. xv. of Træ. Digitalis every six hours; and Syrup of Poppies to appease the uneasiness of his throat.

Oct. 8th.—Has passed a restless night, but is now better. The bowels have been opened five times. The feverishness and uneasiness of his throat have subsided. For the first time, I could make an examination. There was a slight fullness only to be seen on the left side. His appetite is good and spirits revived; and he swallows with ease.

Oct. 11th.—There has been again fever and irritation of the throat; he has also spat up about two ounces of blood, and is much alarmed. Bowels confined. Ordered to repeat the opening draught, as occasion may require.

Oct. 16th.—He left off the digitalis on the 13th, in consequence of a headache, which was attributed to its use. He has been daily improving, and the wound looks healthy. There is no pulsation to be felt in the carotid above the ligature, nor in the temporal artery. The opposite carotid beats with unusual force. The pupil of the left eye is more dilated than the right, but he can see equally well with both.

Oct. 20th.—He requires to take opening medicine frequently, otherwise his bowels become confined, and fever supervenes. There is a good deal of irritation of the gums, arising from collection of tartar around the teeth, and a gum-boil has formed since yesterday over the incisor teeth, filled with congealed blood. Ordered an opening draught, and to wash the mouth with muriatic acid gargle, in the proportion of x gtt. to the pint of water. The ligatures were twisted, to expedite their separation.

Oct. 26th.—The ligatures were taken

away, being the twenty-second day from their application. The gums are better, and he is going on well.

Nov. 7th.—Has been down stairs daily since the 26th, and now is enabled to call on his friends and to transact business. He has no unusual sensation, but is weak, and becomes fatigued soon. Pulsation has returned in the arteries above the os hyoides, but not in the trunk between this bone and the place where the ligatures were applied. The wound is not quite healed: he, however, proposed to leave town shortly for the country. He left town a few days after the last report.

SMALL POX.

To the Editor of the London Medical Gazette.

SIR,

CONCEIVING that a deal of unnecessary alarm exists throughout the country regarding the prevalency of small-pox, I would earnestly direct the attention of my medical brethren to the concise and admirable letter of Dr. Clarke, on variola after vaccination, which is inserted in the fourth volume of the Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland.

Being attached to an institution whose admissions average 4000 annually, and situated in a populous manufacturing district, I seriously declare small-pox to be seldom seen by me. For the benefit of those who may not be able to obtain a perusal of the work I have referred to, I will transcribe the following passages of Dr. Clarke's letter:—

“Much of the alarm which has arisen on this subject, and which still continues to agitate the public mind, appears to me to have been produced by want of due attention to a few words of Dr. Cullen's definition of variola—‘*Papulæ phlegmanodæ, quæ spatio octo durum in suppurationem abeunt.*’ Can it be deemed unreasonable to ask practitioners to keep these words constantly in mind, and to wait with patience till the *eighth day* after the eruption has made its appearance? If pus can *then* be found in the pustules, the existence of variola can no longer be doubted; but until this period arrives, no prudent man should venture posi-

tively to decide. Let it be remembered that varicella is defined by the same high authority — ‘*Pustulæ, variolæ similes, vix in suppurationem euntes, et post paucos dies desinentes.*’

“In several recent instances variola and varicella have been confounded by practitioners of experience and ability. These errors must have arisen from opinions formed before the *duration* or *contents* of the pustules could be ascertained. The purport of these remarks is, to guard my brethren against hasty and erroneous judgments, which unnecessarily disturb the peace of families, and tend to throw discredit on a practice eminently calculated to preserve human life, and to lessen human suffering.

“During the last few years, I have seen many cases of spurious eruption, very like, in all the symptoms, to severe small-pox, for the first eight, nine, or ten days from sickening. On the sixth day of the eruption, or at latest on the seventh, the pustules declined rapidly, the fever subsided, and on the eighth day not a vestige of pus was discoverable. Had these been cases of genuine variola, the patients, instead of amendment on the sixth day of eruption, would have remained in a state of increasing danger for many days, and would have experienced a slow recovery.

“That every case of vaccination, however skilfully conducted, affords perfect security against small-pox, I do not pretend to affirm. Nothing human is perfect, and however apparently simple the practice of vaccination may appear, perhaps we have still much to learn.

“In proportion as it becomes more extended, and gets into the hands of ignorant men, we may expect failures to multiply. We know and lament that several such cases have occurred this year (1823); but we also know, that since the beginning of this century, when vaccination was introduced generally among the upper ranks in Dublin, no family has lost a child, in previous good health, by small-pox after vaccination; nor has even one eye been extinguished by this pestilential disease, so far as I am informed.”

RICHARD MOULSON.

Halifax, Yorkshire,
Dec. 1, 1829.

LIFE ASSURANCE COMPANIES.

To the Editor of the London Medical Gazette.

SIR,

IN your number dated the 14th inst. is a letter containing many reasons why a medical man should not receive a fee for his certificate, granted to persons desirous of being assured. Certainly a certificate may be sought by an intimate friend—by a patient whose family he may have attended for years—or the health of the party may be such as to require no more than the simple declaration that it is good or bad. In all such cases, I presume, that either friendship or good feeling would prompt the physician to decline a fee, if it were offered.

But it appears to me that there are applicants for certificates who are not entitled to this consideration. It often happens, for instance, that the person whose state of health the physician is called upon to certify, is not interested in the property to be assured; and that there is no connexion between the physician and the party proposing the assurance.

I have been desired to report upon the health of a person whom I have not seen for some months, or even years. Accordingly an interview has been necessary, and more time has been spent in recalling the character and circumstances of the disease in which I had attended him, than would have sufficed to prescribe for two or three patients.

I have also been required to report on the health of persons whom I have never attended, who may have resided, during many years, in my neighbourhood, without having had occasion to employ any medical man; and a personal investigation has been unavoidable.

There is yet another class of persons, from whom, I submit, a more than ordinary fee is due—persons whose lives are avowedly not select; the value of which may be very much over or underrated, without a minute, and oftentimes tedious investigation, into the nature, situation, and probable danger of any admitted disease.

In all such instances as the above, I

see no reason why the fee should be withheld; the demands upon medical men for their gratuitous services being already inordinately great.

Your correspondent asks—"Suppose the fee to be given, from whom is it to come?"—From the party seeking to be benefitted—the party proposing the assurance, who may be neither friend nor patient?

"Can a medical man put the fee into his pocket with one hand, and with the other sign an unfavourable report?" Certainly not, if it be at once evident that the life is not insurable; but if the case requires investigation, he ought to be paid for the professional occupation of his time, and his report of course is to be true.

I have the honour to be, Sir,

Your obedient servant,

JAMES PLAYFAIR.

Plymouth, 30th Nov. 1829.

PROTRACTED UTERO-GESTATION.

An interesting discussion on this subject took place at the Westminster Medical Society on Saturday the 5th inst. J. Bacot, Esq. in the chair.

The importance of the question warrants us in placing on record the opinions which were then expressed by several of our most eminent practitioners in midwifery; we therefore subjoin a very full report of the proceedings.

DR. GRANVILLE, by whom the subject was brought forward, rose and said—Sir, if I rightly apprehend the objects of this society they are these: to instruct the junior members by the narrative of important cases, and the exposition of useful points of practice, derived from the experience of those who have the advantage of seniority; and, secondly, to discuss general principles applicable to questions of peculiar interest to the world at large. The subject I have selected for our consideration this evening belongs to this latter class. Its discussion will necessarily be confined to those of the members who have had much experience in obstetrical physiology; but I do not, on that account, fear any lack of argument or facts when I consider how many there are

amongst us, possessing the requisite qualifications for carrying on an animated discussion; and, therefore, do I trust that the time employed for that purpose will not be vainly expended.

The question of protracted gestation may be viewed under three distinct aspects—

1.—What is meant by protracted gestation?

2.—Is protracted gestation possible?

3.—How can it be proved?

The first branch of our investigation involves the consideration of the natural period of gestation in women; its attendant symptoms, and the means of recognising pregnancy.

These considerations embrace a variety of subordinate points of discussion, which, in a medical society, must prove of no inconsiderable interest.

The second branch of the investigation is also fruitful in subjects of discussion. The legal part of the question, properly speaking, begins here; the testimony of men is here to be appealed to and sifted; and the opinion of people of different nations, ancient as well as modern, who by their legislative enactments on the subject of protracted gestation have shewn what they thought of such a phenomenon: such an opinion, I say, must be taken into account.

The third branch is the most thorny, yet, to society at large, the most important; for on the negative or affirmative answer, which the question, "can protracted gestation be proved?" depends the preservation or violation of some of the most sacred rights—some of the most cherished feelings—some of the most endearing affections. The succession to hereditary honours, the inheritance of wealth, have often hung doubtful on the settlement of this part of the question; as have the preservation of an unsullied name, or an unstained reputation, without which life itself is less than worthless.

What other question, therefore, can be more important to us than that which I have the honour of bringing this evening before the consideration of the society?

And now for the first branch of our investigation: "What is meant by protracted gestation?" Literally it means that gestation which, reckoning from the moment of conception to the moment of parturition, lasts longer than

the time admitted generally to be the more *usual duration*. But are we in possession of positive evidence which fixes the more *usual duration* of pregnancy in women? I, for one, say nay to that question. It is usual to believe that nine months are the *ultimum tempus pariendi*; but who has proved it by actual experiment? On the contrary, such is the vague notion entertained on this subject by those even who consider the period of gestation an invariably limited one, that some call it forty weeks, and others nine calendar months; as if the one expression were synonymous of the other, although there be a difference of ten days between them.

Doctor Clarke, in his examination before the Lords on a recent trial, said, that "undoubtedly labour must begin at the expiration of forty weeks after the last sexual intercourse;" but when asked to prove it, he was puzzled, as every one else would have been at a similar question. He, however, spoke of examples in his practice where he could assert positively that forty weeks had been the *ultimum tempus*, because the parties interested said to him that intercourse had taken place on such an occasion, and "once only, and for good." Taking for granted that these communicative physiological ladies or gentlemen were not deceived or deceiving, what was the number of such cases known to the doctor? why, about twenty, he said. Surely such a *sum total* cannot be considered a sufficient demonstrative evidence for adopting the proposition that, *undoubtedly* the labour *must* begin at the expiration of *forty weeks*.

I lay stress upon the difficulty of ascertaining the *usual* period of gestation, because it will account for the difficulty also in which the question of protracted gestation is involved.

What means are we really in possession of for ascertaining by calculation the time when a woman will be delivered: the cessation of the menses, or the first appearance of symptoms denoting the occurrence of pregnancy, or the phenomenon of quickening? The first is fallacious, for there have been women who have menstruated for some months after they had become pregnant; and of such cases I have seen myself a good number, in some of which I had an opportunity of procuring portions of the men-

strual fluid and comparing it with some other; and there are many women, also, who become pregnant without menstruating at all between one pregnancy and another. This is the case with several who suckle their children. Nay, I have known cases where young women who were amenorrhoeic for some months before marriage, did, nevertheless, conceive, and bring forth in due time after marriage without once menstruating first.

As to the fallacy of the signs of pregnancy, I believe it to be proverbial and undisputed. Nothing short of the movements of the child can be adopted as a criterion; but when the movements of the child are felt, what date are we to assign to the pregnancy, so as to calculate its *usual duration*? The notion that a woman quickens when half gone, is absurd as a general proposition. There is, perhaps, more variety in this respect than in any other symptom of pregnancy. This third source of calculation, then, fails us; and we are, in fact, left to guess. Hence, when we are consulted on this subject by patients, what do we say? Why we ask the question when the patient had been last regular; and splitting the difference between that period and the next which the patient has missed, we calculate from that time, and reckon forty weeks. But how many such calculations of the days of parturition prove incorrect, even to a week, a fortnight, or a month? Ah! a great many.

I shall tell you presently how I come in possession of such and other illustrative cases; for the present I will assert, that, out of one hundred such reckonings, thirty at least prove incorrect—whether the calculation be made by the female herself or by her attendant accoucheur.

Still we may safely adopt the general notion—that 280 days is the more *usual duration* of pregnancy. Well, then, the meaning of protracted gestation is a pregnancy which notoriously extends a certain number of days beyond 280.

This leads us to the consideration of the second branch of our inquiry—namely,

Is protracted gestation possible?—My answer is, *certainly possible*; because there is nothing in such a notion contrary to the laws of nature. A child

sojourns in its mother's womb forty weeks: why could it not sojourn forty-one or forty-four as well? Are we so well acquainted with the marvellous action that comes on to expel the child at a particular period, that we shall venture to deny the possibility of such an action being arrested, by any cause whatever, for a longer period than *forty weeks*? What is there in the physiological considerations of this problem, which those who deny the possibility of protracted gestation can invoke in their favour, to silence us at once who support the contrary doctrine? They say, forty weeks are required to bring the child to maturity, and no more; but will they deny that many weeks less than that time have been known to be sufficient to bring the child to maturity? In other words, will they deny the possibility of *anticipated* birth, the child being in all respects full grown? Has nature not hundreds of such exceptions; and if so, why should the period of human gestation be so circumscribed? Dr. Rodman, of Paisley, states, that, in 1815, he delivered a lady, the mother of five children, who was confident, on one occasion, that the period of gestation had not extended beyond nineteen weeks. The child lived. Professor Broussais, in his *Essay on Medical Education*, relates the case of a woman who brought forth a live child, which lived to maturity, six months after a previous labour. Broussais was witness to the labour. Now here the child was fit to live at five months and a half. Such cases of exception would have been reckoned fabulous had they not occurred in our own time, and vouched by medical men of high character, being personal witnesses of the facts they narrate. Nature, in fact, is made up of exceptions. Again: if we deny the possibility of protracted gestation, we must of necessity adopt a more extraordinary phenomenon as true—namely, that of *superfoetation*—to explain certain cases (of the authenticity of which there can be no doubt); cases where, a child being born at nine months, a second child was delivered some weeks after.—Either the second child was a case of protracted gestation, or it was one of superfoetation. Nor can it be supposed that, in all such cases (and they are numerous), the uterus was bilobated; for it is curious to re-

mark, that, according to the testimony of two very recent writers, Messrs. Cassan and Dance, who have seen several instances of double uterus, where impregnation took place in both chambers, the pregnancy seldom if ever went its usual course, without serious accident either to the child or the mother. A question was put to me by one of the counsel on the trial already alluded to, which I would put to those who deny the possibility of protracted gestation. "Is there any thing in the idea of protracted gestation—of gestation, for instance, retarded till the 304th day—which is so decidedly at variance with the known laws of nature and the principles of sound physiology, as to preclude all possibility of such an occurrence? In other words, is nature so invariably uniform that no deviation from the more ordinary course of uterogestation can ever take place?"

So far from this being the case, we may at once adopt the opposite conclusion, from analogy and observations made on other classes of animals susceptible of direct experiments, which have corroborated the possibility of protracted gestation. The fact is, that it is an error to assert that nature is invariably uniform in her works. Nature is no such thing. She is consistent with herself on every occasion, but not always uniform. Without looking farther than the very subject before us for illustrations, do we not see the greatest difference in the first appearance of menstruation in young women, and their susceptibility of impregnation; in the development of their breasts, and their coming to the age of puberty?

Do we not see every day that some women will bear children within the first year of their marriage, while others, under apparently similar circumstances, have no children until the second or third year, or later, or not at all? Is it not proved by facts, that some married women will bring forth perfect children at eight months invariably? I attend a lady who is in that condition in all her pregnancies; and if nature sends a child forth a month before what is generally considered the ordinary period of gestation, what is there in the converse state that renders it impossible? Nature, in animal as in vegetable life, brings forth the fruit of impregnation when perfectly mature and well organized, without any reference to calcu-

dars or the artificial divisions of time made by men. If we look to domestic animals, the possibility of protracted gestation cannot for an instant be doubted.

So much for physiology and analogy being in favour of the possibility of protracted gestation; the one negatively, the other positively. We have farther in support of such a proposition an overwhelming host of authorities of the highest character.

I will not trouble the society with the enumeration of these authorities, but it may be stated that they are divided into, 1st, authorities who relate cases of protracted gestation occurring in their own practice; 2dly, into those authorities who vouch for the accuracy of cases related by living and contemporary practitioners; 3dly, writers on physiology and medical jurisprudence, who adopt the affirmative question after mature examination, as to the occurrence of many cases of retarded gestation.

Among the older authors more worthy of faith are—Hostius, Sylvius, the celebrated Harvey—a host in matters concerning generation, Mauriceau, Levret, Lietaud, Heyster, Delignac, La Cloture, Benedictus, Petit, Smellie, and Hunter.

Among the more modern are—Oslander, Forderé, Schneider, Lentosseit, Sprengel, Adelon, Bardt, Capuron, Orfila, Burns, Desormeaux, Dr. Dewees, and Dr. Hamilton, of Edinburgh. My colleague, Dr. Merriman, has actually published a table shewing how often, in his experience, the assumed *ultimum tempus* of 280 days was deviated from, either by anticipated births, or protracted gestation. Of the latter, 22 children were born in the 41st week after the menstrual intermission; 15 in the 42d week; 10 in the 43d week; 4 in the 44th week. Dr. Merriman also asserts that upon a few occasions the period of delivery, dating from the last appearance of the menses, exceeded 308 days, and he relates three cases at length.

I know, sir, that it has been asserted on a recent occasion by an eminent accoucheur, that all written authorities, however high, are nothing to him compared to his own experience, if that experience be negative to their statements; but in that case, what will his own printed authority hereafter be worth in the opinion of those men who are to

come, or of those who are now in the possession of facts gainsaying his experience of *twenty cases*? Is not the testimony of any one author whom I have mentioned, founded on *his* own experience, fully as valuable as that of this sceptical physician? These are *ineptiæ scholasticæ* unworthy of the importance of the subject so treated.

But what imports most in proving the possibility of protracted gestation, is the knowledge that legislators of various nations have assented to the legitimacy of children born considerably beyond the *ultimum tempus*, laid down by my friend Dr. Ch. Clarke, as inevitable.

Without going back to obscure times and laws, but looking nearer us, we find that the Scotch law considers a child legitimate who is born within ten months, that is, upon any day of a whole month after the completion of the *ninth* or more ordinary period, so that gestation protracted to 290 days and upwards is possible, according to the Scotch law.

In another case, the legitimacy of a child born in wedlock during the temporary absence of the husband from his wife, and born 10 days beyond 9 calendar months, was decreed unanimously by all the Scotch judges, and confirmed by the House of Lords and the declaration of Lord Eldon. The fact is, that the principle of the possibility of protracted gestation, has, in almost every case which has come before the House of Lords, been admitted and upheld; and if, in a recent case, the decision was against the party claiming to be legitimate, although born 304 days after intercourse between the father and mother, it was owing to peculiar circumstances of a *moral* nature, and not because the possibility of such a principle was doubted. That principle was left undecided. Many of the decisions of the courts in this country during Lord Coke's lifetime, allow forty weeks and *ten* days as a possible period of gestation.

The Code Napoleon says, that the legitimacy of a child born 300 days after all possible access of the parties, may be disputed, consequently it is not questioned before the 300th day, and even then it is not said that legitimacy is impossible, but open to be questioned or doubted. The modern laws of France, therefore, admit the possibility of protracted gestation.

The Frederician Code of Prussia goes even farther, for it does not absolutely declare illegitimate a child born in the *eleventh* month, although it attaches such conditions to prove legitimacy under that circumstance, as to render it almost unattainable; but then it is the *eleventh* month, or 330 days.

Will you permit me to add my humble opinion in favour of the possibility of protracted gestation to the authorities already mentioned; and in order that the society may know whether my statements are well founded or not, I will trouble them with a few details as to the mode in which I obtain my information.

For the last thirteen years I have had the honor of acting as physician-accoucheur to the Westminster General Dispensary; I have moreover belonged to the Benevolent Lying-in Institution for seven years in the same capacity. All patients in a state of pregnancy who seek relief at those institutions, must of necessity come before me. Their number amounts at present to upwards of twenty thousand; but even so large a number of cases would be a sterile source of information, had I not with industry and diligence, in which I have often been seconded by able pupils and other medical persons, endeavoured to investigate, I will not say all, but a large proportion of those cases, and to record the information thus obtained. These investigations of each individual case, and the results arising therefrom, are committed to registers, which I call analytical, and which I first established on being appointed to the public institutions I have mentioned. The members of the society will, I trust, permit me to enumerate the points thus registered, respecting which certain questions and certain information are thus obtained. They are as follow:—

1. Name
2. Age
3. Residence
4. Date of admission.
5. At whose recommendation admitted.
6. The cause of admission, if other than pregnancy.
7. By what midwife or medical gentleman attended in her confinement.
8. Whether single or married.
9. How long married.
10. How long married before she bore children.

11. Profession of the husband.
12. Expected period of confinement.
13. Date of the quickening.
14. How long has menstruation ceased, or whether menstruation or any coloured secretion in lieu of it, exists.
15. Whether the woman was suckling at the time of falling with child.
16. Number of children she has borne—alive or still-born at the time of birth.
17. How many of those are alive now, and in what state of health.
18. If any died—what number, at what age, and from what cause.
19. Statement of children who have had the natural, the inoculated, or the vaccine pox.
20. How many times has the party miscarried—at 3, 6, or more months.
21. How many of these were in succession.
22. Presumed or ascertained cause of the miscarriage.
23. Whether any live child had been born previous to any miscarriage.
24. The nature of the labours—divided into active or without art, passive or with the assistance of art, distinguishing the manual from the instrumental.
25. Whether the pregnant woman be subject to any habitual disease, either independent of or dependent on pregnancy.
26. (Lastly) General Observations.

I shall not stop to point out to the society the many curious and important deductions which may be drawn from so enlarged a series of inquiries, but simply state that with such data, properly and carefully collected, and personally inquired into, a medical man may venture to form an opinion respecting any question which may be illustrated by such means. From so vast a source of information then, I have drawn facts which leave no doubt on my mind that protracted gestation is possible. The cases which I more particularly selected, on a former occasion, in support of this opinion, were so chosen (out of many others) because in those particular cases the parties were living, and might be called; they were cases where, reckoning from the last day of the lunar month immediately

succeeding the last appearance of the menses, a lapse of time took place to the day of labour equal to

292 days.
298 —
299 —
302 —
313 —
317 —
324 —

A lady, whom I attended this year, living with her husband, and who, when not pregnant, has never once been irregular in her menses, calculated the beginning of her last pregnancy from the middle of the 28 days which elapsed between the last time she had menstruated, and the succeeding period when she ought to have menstruated, but did not; and she fixed upon the conclusion of *ten* calendar months for the day of her confinement. She proved perfectly correct. On my asking the reason of such an unusually protracted period, she assured me that all her other children, three in number, were born after a similar interval. True it is that conception, instead of taking place in the middle of the first lunar period subsequent to the last menstruation, might have taken place at the very end of it, and in that case the interval of retardation would only be two, instead of four weeks. Still the possibility of protracted gestation would be equally made out. On the other hand, who shall say that impregnation may not have taken place on the very day after the last menstruation, and thus add two weeks more to the interval originally allowed and calculated upon by the party?

I observed, sir, in the early part of my address, that the *third* branch of this question is the most thorny, and so must every question which, involving interests of the first magnitude, demands of being not only physically, but legally proved.

Unfortunately, what is legally to be proved is not always what can be *physically* proved. Thus in the cases of protracted gestation which I adduced on the trial before the House of Peers, as coming within my own knowledge, there was no disputing the facts entered on my register. They fully bore out the protracted gestation; but then the lawyers required that the hand-writing of every part should be sworn to by the

persons who wrote the entries; and as these were made by several pupils, scattered in various parts of the country, and time was not allowed to summon them, the evidence and the facts were quashed: but is nature to be silenced and turned aside by gentlemen of the long robe; or by cavils, or artificial distraction in human evidence? No. We will continue to believe natural what we observe in nature; be it possible or not to prove (according to certain legal forms, and to human judges liable to err in judgment) that that which we have observed is positively *true*.

I will instance one mode in which it was attempted to invalidate the testimony of the advocates of nature, and the supporters of the possibility of her occasionally deviating from ordinary laws. The Attorney-General (now Lord Chancellor of England) said, "I have satisfied you, my Lords, that not the slightest degree of reliance can be placed upon conclusions formed upon the representation given by the females themselves respecting the reality of protracted gestation." Yet his colleague, the Solicitor-General (in endeavouring to enforce the importance of Dr. Clarke's evidence, who had asserted that his reasons for firmly believing protracted gestation to be impossible, were founded on about twenty cases which had come to his knowledge, where the time could be accurately defined, and that time was forty weeks), declared that the doctor's testimony must be *infallible, because the information upon which the first day of gestation was ascertained, was given by the females themselves*. So that we are to believe the parties on the one hand, and disbelieve them on the other, according as their declarations answer or not the purpose of the lawyer's argumentation. The thing is too absurd. Fortunately, nature has its laws and its exceptions, and these are both independent of forensic cavil.

Coming, however, to something like nearer proofs of the reality of protracted gestation, I would first remind the Society of the positive experiments made by Tessier on animals; and then allude to positive facts, referable to the human species, amounting almost to experiments proving the same thing, as related by Dr. Hamilton, of Edinburgh, Dr. Dewees, of America, Pro-

fessor Desormeaux, and of Professor Velpeau, in a Memoir which that gentleman published in August last, and which was, by a singular coincidence, only this afternoon put into my hands.

All these cases are very strong, and I know not how those who deny, upon their own authority, the possibility of protracted gestation, can dispute the authority of persons of equal respectability, and, to say the least, of not inferior abilities.

This is the book I have just now alluded to; and in it I find, under the head of what the author calls *Naissances Tardives*, besides the enumeration of cases already known to the profession of protracted gestation, two strong instances of that occurrence related by Madame Borvin, a female practitioner in midwifery; of whom it will be sufficient to say, that, for character, station of life, education, experience, and respectability, she is as different from the woman we call midwife in this country, as any two dissimilar things can be. She was many years attached to the Maternité; and no medical man of eminence is there in Paris who would not vouch for the accuracy of what that lady says. Well, then, Mad. Borvin relates the case of a young lady, æt. 27, who became pregnant within the five first days of August; immediately after which she went into the country, where she experienced the usual symptoms of pregnancy, and remained a whole month without the possibility of seeing her husband. At the expiration of nine months, symptoms of labour came on, and Mad. Borvin was sent for; but these symptoms vanished, and parturition did not actually take place until the 16th of May of the present year, making an interval of one month and eleven days after the *ultimum tempus*. Now, sir, the advocates of the other side of the question will instantly damn this lady's reputation, by stating that the case is one in which a married woman played false to her husband during his absence; but Mad. Borvin, meeting them on this ground, has taken care to tell us that the "severity of the lady's principles of religion and morality" leave no shadow of suspicion for such an illiberal supposition.

The other case is also strong, and can only be overturned by the same illiberal suspicion of the honesty of the mother; but Madame Borvin says on this point,

"Cette dame est parfaitement connue de moi, je la vois souvent, et je suis assez sure de ses habitudes et de ses principes pour garantir l'exactitude de cette observation." The case is shortly this: a lady, aged 30, having three children, miscarried four successive times, and became pregnant for the 8th time on the 9th of July, 1828, when every symptom of impregnation supervened. The husband absented himself during four months; on his return, gestation appeared visibly advanced, and the abdomen large. Mad. Borvin had occasion to examine her at this time, and felt convinced she was half gone. At nine months, symptoms of labour came on, but ceased not long after; nor did they return until the 1st May, 1829, twenty-two days after the *ultimum tempus* fixed by man, and not by nature.

Dr. Velpeau has also recorded two new instances, on the authority of Albert, a German physician. Another case by Derenx, a very extensive practitioner of midwifery, in Paris; and a fourth by Dubois. Lastly, he relates a case which occurred in his own practice, and which, even with the gratuitous assumption of the dishonesty of the mother, and granting that medical men may be mistaken in regard to the first signs of pregnancy, leaves no doubt of the labour having been protracted to the 300th day after conception. But I must refer the members to the Memoir itself, which they will find in the number for August, 1829, of the *Nouvelle Bibliotheque Medicale*.

The paper I hold in my hand, sir, is a copy of a letter from Dr. Hamilton, jun. of Edinburgh, the celebrated obstetrician, dated June 12th, 1825. I will not take up the time of the Society in reading the document (to which any gentleman is welcome to refer after the meeting), but I will content myself with stating, that Dr. Hamilton admits the possibility of that which I contend for—protracted gestation—first, on his own personal knowledge of facts that have passed under his own observation; and secondly, on the knowledge of well-authenticated cases that have occurred to others.

Out of the many other authorities whose names I have mentioned, I will purposely confine myself to that of Desormeaux, the professor of midwifery in the university of Paris, and a

gentleman of the strictest honour; as well as to that of Dr. Dewees, of America, an eminent accoucheur, with whose writings and high reputation the profession in this country must be familiar. With the narrative of the cases of protracted gestation taken from their writings, I shall conclude my observations this evening.

Professor Desormeaux says, a lady, the mother of three children, became insane. Her physician considered that childbearing might have a beneficial influence on the mental disease, and permitted the husband to visit her, but under condition that it should be only once, and at the distance of three months, in order that if conception took place, there might not be a chance of abortion, from the circumstance of any further intercourse. The physician and attendants made an exact note of the time when the husband was permitted to visit his lady. When, at last, symptoms of pregnancy appeared, the visits were absolutely and totally discontinued. The patient was necessarily watched by the female attendants required for her malady, and was, moreover, a lady of the strictest principles of morality. She was delivered at the termination of nine solar months and a fortnight of a *small* child, and Professor Desormeaux delivered her. This case, I need hardly observe to the society, is of the utmost consequence; first, because it is vouched by two highly respectable physicians, the one an accoucheur of eminence, and both of whom are living; secondly, because of its recent date; thirdly, because the very hour of impregnation was ascertained; and lastly, because the lady being afflicted with a serious malady, had probably her period of gestation retarded by it, a conclusion which might almost be said to be confirmed by the child being unusually small. It is true the retardation of the term was only fifteen days; but it proves that gestation may actually be protracted beyond the pretended and inevitable *ultimum tempus*, and consequently, that the asseveration of those who, without any practical fact to support it, declare that the going even one day beyond the forty weeks is impossible, is refuted by that very nature whose laws they pretend to *define* and *confine*.

Dr. Dewees' case is this:—The husband of a lady was obliged to absent himself from her, in consequence of

embarrassment in his affairs. He returned one night clandestinely, and his solitary visit was only known to his wife, her mother, and Dr. Dewees. The consequence of this visit was conception, and the lady was delivered of a healthy child in nine months and thirteen days after that nocturnal visit.

These, sir, are but few of the many instances I might adduce; still they are of such weight and authenticity that they alone are sufficient to silence any remaining doubt in the breasts of candid and respectable men. Among living practitioners, I have mentioned such a constellation of highly-gifted practitioners that it would be difficult to find their equals, and decidedly impossible to name their superiors. Let that go as a balance against the fact, that the sceptical physician, who denies the possibility of protracted gestation, is a very eminent practitioner.

Having brought to a conclusion what I had to offer to the society on this subject, it remains for me to apologise to the members for having trespassed so long on their attention.

[The following are the documents alluded to by Dr. Granville, containing the opinions of Professor Hamilton.]

Edinburgh, 23, St. Andrew's Square,
June 12th, 1825.

Dear Sir,

* * * *

I have enclosed to you such extracts from my very last lecture on this subject, as may enable you and your law friends to understand my opinion.

In addition to the enclosed, I have to mention a case which, from particular circumstances, I have not thought myself warranted in detailing in my lecture.

A lady residing at some distance from Edinburgh, according to her own admission, at the age of from 35 to 37 became pregnant, passed as she supposed the eleventh menstrual period, and bore with great difficulty a dead child. In due time the same circumstance again happened.

After this second disappointment I was consulted on the case, and I was decidedly of opinion, that although she could afford nourishment and origination to the infant up to the ordinary period, she was incapable of doing so beyond that time. My advice, there-

fore, was, as she had resolved to come to Edinburgh to be under my care, that whenever she should pass the tenth menstrual period by one week, she should allow me to bring on labour in the way I am accustomed to induce premature labour, in cases of narrowness of the pelvis. The result was most fortunate; a very fine living daughter, and it may appear most extraordinary, though it is not less true, that she has again had another child (a boy) born under precisely similar circumstances.

With respect to the case of the Marchioness of Tweeddale, you have been misinformed. After bearing two children, she was left by the medical attendant and midwife, and at the distance of *fifteen hours* bore a third infant. Her constitution received such a shock from flooding, that she eventually died in France.

Believe me to be, dear Sir,

Yours sincerely,

JAMES HAMILTON, Jun.

Extracts from Dr. Hamilton's 17th lecture :—

"Having thus mentioned the facts* by which I conclude that pregnancy is occasionally protracted beyond the more ordinary period of nine calendar months, it may be asked, how long I consider it possible that it may exceed the usual period? To this I reply, that according to my experience, there are not yet sufficient data to establish more than the general principle.

"While I admit the general principle, that the period of pregnancy may be exceeded certainly by three or four weeks, I must agree with the ancient lawyers and judges, that in any particular case the decision must depend upon circumstantial evidence. But while I concede thus far, I should take the liberty to differ from many authorities quoted, particularly the precedents published by the parliaments of France during the seventeenth century. They seem to have proceeded upon the principle admitted by the Roman law, that the character of the woman should decide the question.

"But in matters of this kind we

should err most egregiously if we trusted to character, which is so obvious a proposition that it is scarcely maintained in the present day. In truth, it is to be considered only as one link of the chain.

"Foreign practitioners talk a great deal about the influence of passions of the mind—mode of living—certain diseases during pregnancy—evacuations during the same state, such as blood-letting and purging, in retarding the term of pregnancy; but the result of my experience is in direct contradiction to such ideas.

"I never met with any instance where I could attribute the protraction of pregnancy to passions of the mind, or to evacuations. What I mean, therefore, by circumstantial evidence in any given case, respects the state of the menstrual discharge. Thus, suppose that a woman alleges that she has gone eleven calendar months with child, dating her pregnancy from intercourse on a particular day, if I were a judge I should demand evidence that she had been obstructed from the time of the alleged intercourse; for if she had menstruated after that time, she could not have been pregnant."

That the above may be intelligible, the following extracts from the preceding lecture are added :—

"We are obliged, therefore, to reject the testimony of women themselves, and to be directed in our judgment by other circumstances."

"The principal of these is the duration of the menstrual obstruction."

"A woman cannot fall with child during menstruation, but she may immediately after that period, or immediately before the next expected return."

"If, therefore, the tenth menstrual period be ever exceeded, there is evidence that the woman may have gone above nine calendar months."

"Now, Dr. Young, my father's predecessor in this chair, in his note-book here before me, says expressly, that he has known women go to the day of the tenth eruption, but never beyond that."

"But the result of my experience has been different: in one case, many years ago, the lady exceeded the tenth revolution by twelve days. Another lady exceeded it by sixteen days, and another by twenty-four days. This latter patient menstruated on the 1st August, and was not delivered till the

* One of the most remarkable which Dr. Hamilton mentions, and for the accuracy of which he vouches, is the following :—

"Mrs. —, menstruated Nov. 1800, and might have been with child that week, say Nov. 5th. She was not delivered till Sept. 16th, 1801, being seven days past the eleventh menstrual period."

28th June. Another lady, the mother of a large family, exceeded her period by above a fortnight, on the 4th March, when her husband went to England, where he resided for some months; but she was not delivered till the 6th of December."

"Of the truth of those facts there can be no doubt, and you see that they tend more to decide this question than cases founded upon the absence of the husband, or in the instances of illegitimate pregnancy, upon the date of the connexion of the parties."

Dr. FRANCIS RAMSBOTHAM availed himself of the kind invitation just given to visitors by the President, to offer a few remarks on the subject before the Society, as no member seemed inclined to reply to Dr. Granville's observations. He thought that nothing which Dr. Granville had advanced that evening, nor any thing indeed that had previously come before the public, proved satisfactorily that *human* gestation could be prolonged to any extent. The facts brought forward by Tessier indeed, to which Dr. Granville had alluded, were exceedingly valuable, and conclusive with regard to *comparative* gestation, and analogical reasoning would lead us to infer from them that *human* gestation also might possibly be occasionally somewhat protracted; but he contended that no case had been made out of decided prolonged gestation in the *human* subject. The opinions which were elicited on the late trial, regarding the Gardner peerage, were exceedingly valuable, as being those of the most eminent men in the profession; and it was strange to see how much opposed the two parties were to each other in their sentiments. On the one hand, Dr. Clarke, Dr. D. Davis, Dr. Gooch, and others, believed human gestation never to exceed beyond a day or two the nine calendar months; while Dr. Merriman, Dr. Granville, Dr. Blundell, Dr. Elliotson, and some other gentlemen of eminence, were ranged on the side of more lengthened protraction. Some *females*, however, were examined on that occasion, who believed that they themselves had exceeded the ordinary limits; but their calculations were made in a very vague manner, and from very uncertain data. On reading the evidence, only one case struck his mind as being strong,—that of Mrs. Mitchell, who calculated from the absence of her husband.

He was purser to his Majesty's ship *Galatæa*, and she said he left her on June 6th, 1798, and did not return, yet she was not delivered till April the 11th following, making a period of ten months and five days; but how was her statement borne out in the sequel? It was proved by a clerk from the Navy-office, that the *Galatæa* was moored in Plymouth Sound from May 5th to July 9th of that same year. Mr. Mitchell was purser of the vessel, and it was shewn, by the muster-rolls and his own signatures, that he never left his ship during any part of the time she was lying there. From these remarks it might be gathered, that he was opposed to the protraction of human gestation. True *utero-gestation* he believed indeed to be fixed, definite, and unvarying; but there is a space, a period of time, between conception and the lodgment of the ovum in the uterus. It must be remembered that on impregnation taking place, the fimbriated extremity of the fallopian tube seizes the external surface of the ovary, and squeezes from it whatever the female supplies towards the formation of the new being. Being received into the tube, the impregnated ovum travels along the canal until it is deposited in the uterine cavity. It is generally supposed that from seventeen to twenty days are occupied in this transit: but is the time during which it is passing along the tube always the same? He believed not: he thought it varied considerably from a few days to above a month, and he thought if we admitted this variation in time during the transit of the ovum, that admission would explain all the deviations from the common course of events, which we generally see in human pregnancy. That the ovum remains some time in the tube he inferred from dissections of animals; for in the rabbit, whose period of gestation is thirty days, the ovum was not found in the uterus until the sixth day, according to Haighton's observations, and the fourth day according to Cruickshank's. In the sheep too, whose ordinary time is five months, Haller did not find the ovum in the uterus until the seventeenth day. If he were asked how is life preserved to the ovum during this time, how is it nourished, and whether it increases in size; he would say, it does not increase, because it cannot be attached to the mother by any vascular connexion; if it were, the case would

become one of *extra uterine* gestation, as the ovum would be fixed to one spot, and never could be propelled into the uterus; life is continued to it, although not attached to its parent's body, in the same manner as life is continued to an egg for many months after it has been laid, and also to a seed for years after it has left its parent plant. Eggs have been hatched after a voyage to the East Indies and back; and we are told by Ray that melon-seeds kept forty years produce better plants than when fresh. But some few dissections also in the human subject would bear him out in the idea that the time of transit of the ovum is not always of the same duration.

In the second volume of the *Transactions of a Society for promoting Medical and Surgical Knowledge*, there is an accurate description, given by Mr. Ogle, of a dissection, by John Hunter, of the body of a woman who died more than a month after impregnation, in which no ovum could be detected in the uterus. Mr. Burns, in three instances, within the month, could not find an ovum in the uterus: Haller says he never detected any before the seventeenth day; and Blumenbach thinks the ovum is not formed for a fortnight, when he believes the *nissus formativus* comes into operation. On the contrary, in the volume of the *Philosophical Transactions*, published in 1817, there is a case, by Sir E. Home, of the dissection of an unmarried woman, who died on the eight day after connexion, and in whose uterus an ovum was discovered perfectly formed, of the same size as Hunter describes them at the month. Sir E. was assisted in his microscopical observations by Mr. Bauer, of Kew, and has given magnified drawings of the appearance of the ovum. If we consider this case to be relied on, we have a variation of three weeks in the different instances, and this will be sufficient to explain all the variations he has ever heard of entitled to credit.

Dr. A. T. Thomson stated that, in his opinion, there existed no reason for supposing that nature might not deviate from her laws, as far as regards the period of utero-gestation; since, in every other respect, we find deviations. He was anxious to know whether any correct information had yet been obtained respecting the immediate cause of parturition; for if this is connected with states of the system, which are liable to

variation, from individual differences of either function or structure, it is more wonderful that the period is so constant, than that occasional variations should occur. In reply to Dr. Ramsbotham, who contended that the period of utero-gestation is fixed, and that any apparent difference arose from variations between the time of conception and the introduction of the ovum into the uterus; he maintained that no inference could be derived from his arguments against Dr. Granville's position, as it is of little consequence to the legal part of the question, which is the point at issue, whether the length of time between conception is attributable to any difference in the period that the ovum takes to travel from the ovarium to the uterus, or in the time that it remains in the uterus prior to its expulsion. If the whole time, in the majority of cases, be 280 days, we may conclude this to be the natural period; but if cases, that can be verified, have occurred in which this period was extended to 290 and 300 days, then we had a right to infer that there might exist circumstances connected with certain individuals, which would either shorten or protract that period. In a legal point of view, this is a fact of great importance; the establishment of it is connected with moral and religious conduct, of vital interest to civilized society; and, in his opinion, no case had yet been made out to invalidate the conclusion arrived at by the proposer of the question—that protracted utero-gestation may really take place, and has frequently occurred.

Dr. Locock gave it as his opinion that in all cases of supposed protracted pregnancy the difficulty was to get at the two ends of the chain; the date of parturition was easily ascertained, but how was it ever possible to determine the exact date of conception, without risk of meeting with wilful misrepresentation or involuntary mistake? One striking proof of nature having a fixed rule was the fact, that in cases of extra-uterine foetation, where the child is so situated that parturition at the nine months' end cannot take place, the child does not go on increasing in its unusual situation, but *dies*. Foetal life seems to cease at a certain point; and this point is the same at which all people agree to fix the natural period of utero-gestation. Even in married women, where there may be no motive for deception, we all

know how liable we are to be misled : they are often fancying that they are pregnant ; they increase in size, the menses stop ; they even think they feel the motions of the child ; but it all goes off again. In the same way they cease to menstruate from ill health for a month or two, and as they feel sick and unwell, they think themselves pregnant. The ill health ceases, and just as the uterine functions are about to be restored, they fall with child ; and hence they think they remain pregnant ten or eleven months, when, in fact, the real pregnancy did not begin till one or two months after they had supposed. It is well known that women may thus become pregnant, for they have even done so before they have ever menstruated at all, as is seen in a case related by Sir E. Home in the Philosophical Transactions. Dr. L. did not deny the possibility of protracted utero-gestation ; he would be presumptuous to do so, when it had been proved to occur in the lower order of animals, but he had never met with a case in his own knowledge in which he could not explain the circumstances in the way he had suggested. All such supposed deviations from nature's rules should be received with the utmost caution and suspicion. Dr. L. related a case reported to him by the agents in the Gardner Peerage case, which was confirmed by very strong testimony :—A naval officer's wife was confined ten months after he had left her. By the advice of a medical man, (the late Dr. Hopkins,) he tried an experiment to prove whether she had, as might have been the case, some peculiarity of constitution ; and if so, the same ten months' pregnancy would of course occur a second time. A single cohabitation took place, and then the lady was secluded for a time under the most careful surveillance ; in ten months from that time she was delivered, and the naval officer's suspicions of previous infidelity were at once dissipated. When we see what slight moral or physical causes will interrupt a labour already begun, or will suspend the progress of an exanthematous disease, it is fair to suppose that there may exist causes which will occasionally put off the period at which parturition naturally occurs.

Dr. MERRIMAN said that he thought the opinions of honourable, virtuous married women, upon this subject, were

treated with too little consideration. It sometimes happens that women who can have no sinister motive, or any interest to deceive themselves, their husbands, or their doctors, express a belief that they have exceeded the usual duration of pregnancy. Some circumstances, about which a medical man cannot always very minutely inquire from a virtuous woman, lead them to date their conception from a particular day, and their pregnancy extends beyond 280 days from that particular occasion, and they therefore think that they have passed the usual period of gestation. Now these are often women who have had several children, women of good education and information, very competent to form a correct judgment. But the opinions which they have deliberately formed, are slighted, and the accuracy of their calculations are denied. And why ? because it is assumed to be impossible for the law of nature in this respect to be violated, and therefore it is asserted that their calculation cannot be true. If the question is asked, why it cannot be true, the only answer is, that very convincing one,—"because it cannot."

But it is thought that certain evidences, which have been confidentially communicated to different physicians, set this important point at rest. One accoucheur has met with ten cases, another with five, another with twenty, in which the ladies—unmarried women, have once, and once only, been so unfortunate as to make a slip ; and in no one of these cases has the period of 280 days from the day of the accident been exceeded. It should be borne in mind, however, that there is one case upon record where intercourse took place once, and once only, and the period of 280 days was exceeded. This may be found in the trial of a man who was prosecuted for the seduction of the plaintiff's daughter ; and in giving evidence, under her solemn oath, she swore that the only time she ever had connexion with the defendant was on the 8th of January ; that it was a Sunday ; that the intercourse took place about eight o'clock in the evening ; and other circumstances are enumerated to fix the exact time. She went on to swear that the day of her delivery was the 18th of October, which, including the day of ~~concept~~ and that of delivery. Surely this evidence

as that given confidentially to a physician; and, according to this statement, the impossibility of exceeding 280 days of utero-gestation was completely disproved.

Mr. NORTH was of opinion, that the occurrence of protracted gestation was less difficult to comprehend than had been generally imagined. Although it might be impossible satisfactorily to explain the nature of the various causes which so frequently induced premature delivery, the existence of such causes could not be denied, and Mr. N. imagined that the opposite condition of the mother, which led to too early delivery, might fairly be supposed to procrastinate the ordinary period of utero-gestation. He was unwilling to enter into any speculation upon the subject. Upon such a question it was difficult to obtain satisfactory proofs in the affirmative, but he considered the following case in itself a sufficient proof that protracted gestation occasionally occurred. A young lady, about 16 years of age, had some years ago been under Mr. North's care. He had reason to believe she was afflicted with some uterine disease, and upon examination it was found that the os uteri was swollen and excessively tender; the cervix preternaturally hard, having almost the feel of schirrus. In a year afterwards this lady married, but she suffered so much pain from sexual intercourse, that she was obliged to separate from her husband's bed, after having lived with him but one week. It soon became evident that she was pregnant, and in 304 days from the third day of her marriage she was delivered of a son. Mr. North doubted the utility of the request which one gentleman had made, that Dr. Granville should explain *how* protracted gestation happened. He thought it would be just as impossible to explain why nature sometimes deviated from her usual course in a still more extraordinary manner, and united two boys together, or produced a child with two heads and one body. Mr. North concluded by observing, that if no exceptions happened to the ordinary period of utero-gestation, it was the only process or law of nature that was not occasionally deviated from.

[The hour having now expired, it was agreed to adjourn the discussion till next meeting—*this evening.*]

IMPOSING RESTRAINT ON LUNATICS.

To the Editor of the London Medical Gazette.

10, Montague Street,
December 7, 1829.

SIR,

No one entertains a higher estimate of the value of fair criticism than I profess. I am also fully sensible how incompetent we all are to judge of its correctness, when self is concerned; I therefore decline offering any observations upon your reasoning and conclusions in the last Number of the Medical Gazette on my letter to the Editor of *The Times* of the 26th ult.

You must allow me, however, the liberty of expressing my opinion, that it is nothing short of combining with popular clamour to prejudge a professional man, who rests his defence in the very letter criticised, on circumstances he declares he cannot divulge without violating professional confidence.

Surely, Mr. Editor, it would have looked more like impartiality, supposing that you felt yourself imperatively called upon to bring into immediate discussion a subject, the whole of which is still unpublished, to have given my letter entire, as printed in *The Times*. Your readers then would have had an opportunity of deciding for themselves on my conduct, as far as it is explained. Your critical remarks might have followed, and have been perhaps better understood. As it is, you select only certain passages, and separately comment upon them, which, when read with their context, may bear a very different interpretation.

If you mean to do me justice, as I do not doubt, I must request you to print my letter in the next Number of your Journal, as it is inserted in *The Times*.

I am, Sir,

Your obedient humble Servant,

G. MAN BURROWS.

[Our *only* motive for not having inserted the letter of Dr. Burrows before was the belief that it had already been made sufficiently public, from the extensive circulation of the paper in which it appeared: that it arose from no hostile feeling, he must be convinced, from our having given place, unasked, to his first "explanation." We now subjoin the letter to which he alludes; and we do so, not because we

think it will alter the opinion of our readers on the subject, even if they do not happen to have seen it already, but because it might otherwise be supposed by Dr. Burrows that we had not dealt fairly by him.]

To the Editor of the Times.

Sir,

After my appeal to the public on the 7th instant, I flattered myself that judgment on all parties concerned in the case of Mr. Freeman Anderdon would have been suspended, and further animadversion reserved till the pending judicial proceedings fully disclosed the particulars. Nevertheless, it appears that neither a sense of equity, nor respect for private character, avails, when popular clamour is excited. Thus goaded, a man must reply or suffer odium.

Regard for the feelings of an honourable family, might probably still have induced me to endure in silence the calumnies poured upon me. But when I find so influential a journal as *The Times*, checked by no consideration, open its columns to the rhapsodies of an obvious madman, and thus give them all the weight of sober truths, I am aware that no reputation, however fair, can resist the consequent unfavourable impression. Surely there was, in the letter which you inserted from Mr. James Wells, of Sudbury, to Mr. Peel, sufficient to create a suspicion of the soundness of the writer's intellects. Had you made any inquiry before you published his letter, you would have learned that the said Mr. James Wells was found a lunatic, under a commission issued a few years ago, and which is not yet superseded.

How the Secretary of State could have been imposed upon by such a frantic effusion, as to condescend to notice it; and why his secretary, in his answer, should introduce my name, which is not mentioned in the letter, I cannot more readily comprehend than the reason for its finding a place in *The Times*. However, this is not the first time that the cunning lunatic has made easy dupes of wise men.

Thus assailed, I must claim the privilege of space for further observations.

To publish a detail of the overt acts of insanity, upon a knowledge of which I judged Mr. Freeman Anderdon to be of unsound mind, neither the vulgar taste for tales of madness, nor even my own justification, shall induce me to do, in violation of professional confidence.

The particulars of his case are submitted to those who have authority to inspect them, and time must disclose them. I unequivocally admit, that medical examination of a suspected or alleged lunatic should always precede, where it is possible, his being placed under restraint. But many cases must, and do occur, where that preliminary is wholly impossible. The case of Mr. F.

Anderdon is precisely one of that description. The unsettled, wandering habits of this gentleman presented an insuperable obstacle to an interview with him; and it was represented to me, that to preserve him from utter ruin, he must be placed under restraint by the following evening.

Some of the eccentricities in the person and dress of Mr. F. Anderdon, but by no means all of them, have been described in the police report. But these eccentricities are not confined to external appearances; and as they are notorious, and relevant, I may give publicity to them.

Although still a young man, this gentleman has, for several years, without any known cause, estranged himself from his highly respectable relations and connexions, and, shunning all human association, took up his abode in a very obscure disreputable part of Lambeth-marsh. There he resides, in a small, miserable, dilapidated house, with broken windows, and a few iron bars across the lower one. It may be inferred that he has few visitors, for neither the gate of the fore-court, nor house-door, has bell or knocker. He lives a solitary being, without any servant or inmate. His meals he takes at cook-shops, where the lower orders resort. No one knows when he goes out or will return, or can give any account of his movements.

Let me here ask, how an interview and medical examination was to be obtained within twenty-four hours with such a character?

Had he, by chance, been found at home, murder might have been the consequence of intrusion; for he was said to be likely to make a desperate resistance, and was well known to keep loaded fire-arms at hand.

With a most anxious desire for me to obtain an interview with their brother before restraint was imposed on his actions, Messrs. O. and J. Anderdon undertook to employ themselves next morning in ascertaining if any way presented of effecting it. They met the following afternoon at my house, in Montague-street, by appointment, and reported the failure of their endeavours. No alternative being left, instructions were then given to two of my attendants, who had been ordered to meet those gentlemen, and they were directed as to the best and safest probable mode of executing their duty. Their directions were, to exercise every delicacy and caution towards Mr. F. Anderdon; to watch his return home; to accost him at his gate before he got in doors; to tell him candidly for what object they came; and to use no violence, but endeavour to persuade him to permit their continuance with him in his own house till the following morning.

And here I shall take leave to correct one of the numerous falsehoods circulated,—viz. that the domestic privacy of Mr. F. An-

derdon was violently broken in upon by the entrance of two keepers into the room where he was sitting. The fact is, they never crossed his threshold, or entered his house in any manner. Indeed, how were they to gain such admission, when no one, according to the account published of the transaction, was in his house except himself, to open the door? Were the men likely to effect an entrance secretly, at the risk of being shot? Mr. F. Anderdon still being at the gate of his fore-court, immediately cried out for aid; and the keepers were instantly seized, never having had charge of him.

That the keepers entirely conformed to the humane directions they received, that gentleman himself acknowledged openly at the police-office, by shaking hands with one of them, and thanking them both for their civil and proper behaviour; yet these agents, who so well conducted themselves in executing one of the most delicate, and often dangerous, duties that can be undertaken, were hand-cuffed like felons, thrust into the black hole of the watchhouse, with the vilest wretches, denied their repeated requests for pen, ink, and paper, to communicate their situation, and were thus kept imprisoned for sixteen hours, and were then dismissed by a magistrate for want of any charge against them!

Some have imagined that I signed a certificate to convey Mr. F. Anderdon to an asylum for lunatics. This is a wilful error. The sole object intended and expressed was to keep him in his own house, being the only practical means of insuring such a medical examination as was necessary to be instituted previous to any application for a commission of inquiry into the state of his mind.

Others conceive, that an opinion on the sanity or insanity of a person's mind ought not to be formed and decided upon any representations at all. Yet, from the history of a case we can often draw the clearest inference, while a personal examination without it will elicit nothing.

In our courts of judicature medical opinions are permitted to be received respecting the soundness or unsoundness of a mind, though the witness may never have seen the lunatic.

Dr. Monro and I attended at a trial ("Farmer v. Field"), which occupied two days, at the last Surrey assizes, where, after hearing the evidence on both sides, we were examined as to the soundness of an individual's mind at a specific period, when he had been visited by neither of us. I remember a more remarkable instance in point. At a trial ("the King v. Hibbert") before Lord Chief Justice Tenterden, to traverse a commission of lunacy, a medical gentleman, eminent for his knowledge in mental affections, was attending merely from

curiosity, and he was put into the witness-box by the present Attorney-General, and desired to give his opinion from the evidence he had heard in Court, never having examined the lunatic whether he was of sound or unsound mind; and that opinion, so delivered, had of course an influence with the jury in consigning him to all the degrading consequences of a verdict of unsound mind.

I hold myself blameless for acting on the evidence adduced by the Messrs. Anderdon of their brother's malady; and so, in candour and justice, ought every one till they learn the nature of the evidence I received. They were known to me to be gentlemen of the highest character and respectability; and with one of them I had been personally acquainted several years.

Your correspondent, Mr. Browne, clerk to the metropolitan commissioners in lunacy,—in an answer, somewhat gratuitous perhaps, to an anonymous querist in *The Times* of the 10th instant,—gives an interpretation to the act 9 Geo. IV. cap. 41, in reference, I presume, to Mr. F. Anderdon's case, very different indeed to my reading of it. I have not had time to ascertain which of us is right. But if I have acted in contravention of any of its provisions in this case, I have done so unintentionally, and repeatedly; and in this I have erred in common with other medical practitioners. However this may be, I do not, upon a review of the peculiar circumstances of the case in question, see in what way I could have acted otherwise. Restraint, *i. e.* mere supervision, is not coercion, nor does it imply removal.

If it be enacted, that before an insane person can be placed under any restraint, as Mr. Browne interprets, an order must be first obtained from a relation, and likewise a certificate of insanity, signed by two medical men after separate examinations; what may not be the dreadful consequences! Suppose a person is seized with furious delirium, or a sudden paroxysm of mania,—a common occurrence,—are the parties suffering or in danger from his fury to remain passive, and not put him under any restraint till a relation orders it, and two medical men, who may not be easily found, sanction it by distinct visits and signatures, lest they should incur the penalties of the law, or public obloquy?

The new act for the care of the insane, as a whole, is an excellent measure; but it is not within the scope of legislation to frame an enactment to meet all the varieties and modifications of so protean a malady as mental derangement.

If, by the provisions of it, power be really given to prevent any restraint being imposed, except under the regulations just referred to, and which leave no latitude for acting according to the nature of the case, then is an able writer on medical juris-

prudence correct in saying, that "the enactment will be oppressive in its operation, and incompetent to meet the exigencies of intellectual calamity,—an act calculated to confirm and aggravate the horrors of madness, to invite suicide, and multiply murder." What has resulted from the case of Mr. F. Anderdon proves the serious and discouraging fact that a character, hitherto unimpeached, cannot secure a professional man the credit even for good intentions. Without a possible motive more than in common cases, he may be not only suspected, but accused of the worst actions. No one who reflects will deny, that insanity in its characters is dissimilar to every other disease. The ordinary rules which govern us in other afflictions of humanity do not apply in this, but are often reversed. It follows, that the physician who expects successfully to treat it must obey the indications of the moment, and if he sometimes errs in judgment, is it to be wondered at? Besides, each case, perhaps, involves a legal question, and many proceed to a legal investigation, in which the name and conduct of the attending physician is necessarily implicated. No physician, therefore, is so exposed to animadversion, or, from fear of a breach of professional faith, so restricted from defending himself.

Consequently, if the present illiberal system of arraigning and prejudging a physician's conduct from *ex parte* statements be pursued, what man who knows that his reputation is his existence will devote himself to the study and treatment of insanity, when the practice is fraught with such awful responsibilities?

Supported by the consciousness of neither intending nor doing wrong, I confidently look for reparation from those who, in ignorance of the facts, have, through the medium of the press, so distorted the truth.

I am, Sir,

Your obedient servant,

G. MAN BURROWS, M.D.

10, Montague-street, Russell-square,
November 24.

LONDON UNIVERSITY.

To the Editor of the London Medical Gazette.

University of London,
Dec. 8, 1829.

SIR,

In your publication of last Saturday you announce, that "the Council of the University have abandoned all intention of attaching an hospital to that institution."

You have been misinformed, for the

Council have not abandoned their intention of attaching an hospital to the institution.

I request that you will insert this note in your next Number.

I am, Sir,

Your very obedient Servant,

LEONARD HORNER, Warden.

[We have only to say, that we did not insert the paragraph alluded to without such authority as we had reason to believe was good.]

BOOKS RECEIVED FOR REVIEW.

The Properties and Preparation of the Rio Negro Sarsaparilla, and of the Angustura Bark, practically examined. By John Hancock, M.D. Fellow of the Medico-Botanical Society, &c.

Descriptive Catalogue of the Anatomical Museum of the University of Edinburgh.

Auli Cornelii Celsi de re Medica, libri octo, ex reconsione Leonard Targii, interpolationibus tantummode emendatis, curante G. F. Collier, M.D. (Vol. I.); together with an entirely new Translation of the same Author.

De Lingua Anatomica Quaedam et Semiotica. Dissertatio Inauguralis quam Consensu Inclyti Medicorum Ordinis, pro Gradu Doctoris in Medicina et Chirurgia, publice defendet auctor Robert Foriep, Saxo-Vinariensis.

NOTICES.

The great length to which the important discussion on Protracted Gestation has extended, and the anxiety to comply with Dr. Burrows's wish with regard to the insertion of his letter in the present number, must plead our excuse with those gentlemen whose papers are thus unavoidably postponed till next week.

The circumstances above alluded to have also compelled us to omit the letter from "A Professional Friend."

The communications of Mr. Luke—Mr. Bond—Mr. Hoskin—Mr. Koecker—Mr. Smith—Mr. Johnson—Mr. Morley—A Surgeon Apothecary and Man-midwife—Eblanensis—Amicus Justitiae—Dr. Harwood—Jonathan Oldbuck—and Mr. Boyne, have been received.

J. R. M. is probably aware that the letter of "Wintoniensis," in another Journal, is undergoing legal investigation, and that we have on that account declined publishing his letter.

We should have had much pleasure in publishing the letter of "A Member of the Westminster Medical Society," had not we given insertion before the receipt of his paper to one which appeared to us to supersede it.

Mr. B.'s paper next week.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, DECEMBER 19, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XII.

**Recapitulation.—Chronic Abscess—Hectic Fever.*

I spoke to you, gentlemen, in my last lecture of the various cases in which it is necessary to open abscesses, instead of waiting for their natural discharge; and in most of which it is also advisable to open them early, in order to limit the extent of the mischief which suppuration might produce. As I do not know that I enumerated to you accurately, on that occasion, the *whole* of the cases that come under this head, I shall now repeat what I then said, in order to make the catalogue complete.

First.—This mode is necessary where the matter forms deep in the limb, and where the progress to the surface is opposed by strong fasciæ, tendons, or muscles—as in deep suppuration in the fore-arm, in the thigh, in the neck or back, in the palm of the hand or sole of the foot.

Secondly.—Where violent inflammation attacks a part in which there is an abundance of cellular and adipose tissue, such as about the termination of the rectum and the neighbourhood of the anus; and this more particularly when, in addition to the existence of much cellular tissue, which is the seat of inflammation, there are muscles or fasciæ, or other parts over this tissue, which tend to prevent the pus from coming to the surface, as in the formation of matter about the urethra in the male, either in the perineum or behind the scrotum;—in abscesses occurring in the groin, or deep seated in the neck.

Thirdly.—Wherever matter forms in parts of very dense and unyielding texture, or in

those in which there is a very abundant supply of blood-vessels. The hand and fingers exemplify this circumstance.

Fourthly.—In the formation of matter that takes place in the immediate neighbourhood of the great serous cavities or of the joints.

Fifthly.—In those that might interfere with parts which are immediately essential to life—such as the formation of matter about the throat, in the neighbourhood of the larynx, or in the immediate vicinity of the trachea and œsophagus generally.

Sixthly.—In those suppurations which are produced by the injection into the cellular membrane of irritating fluids—such as an extravasation of urine or feces.

Lastly.—In certain cases where it is expedient to prevent an extensive suppuration, on account of the deformity which this might involve, and where the small puncture made at an early period with a cutting instrument will leave a less considerable cicatrix than that which would result if we allowed the matter to come forward so as to produce distention and pointing of the skin. This applies to the formation of abscess about the face.

The pus which is contained in an abscess being excluded from external influence, undergoes no change after it is secreted—no change in composition. It may remain weeks or months, or, I might even say, years in such a situation, and not undergo any of those spontaneous alterations that take place if it is open to the air. Hence, when pus is let out, it has but little odour—that is, it has only a faintish smell. Sometimes, however, we find that the matter which we evacuate has undergone decomposition—that it is putrid—in fact, instead of a white, thick, soft, homogeneous liquid, we let out a dark and stinking fluid, in which there are numerous streaks of black and blue, sometimes mixed with coagula of blood, and excessively offensive to the smell. In some instances the matter presents the ordinary appearance of good well-formed pus,

but yet is very offensive. To the senses there is no other indication of a change except fœtor. Now this is a state observed particularly in abscesses occurring in certain situations. It is noticed very commonly in those that are formed in the neighbourhood of the anus, or near the situation of the large intestines—in those that are formed in the neighbourhood of the male urethra, either in the perineum or about the scrotum—in those that are formed near the entrance of the female organs of generation, as the labia pudendi.

These are situations in which we often meet with the phenomena in question. At the first view you might suppose that some communication existed between these outlets and the cavity of the abscess, and that thus the decomposition might be accounted for; but this is not the case. We find it in instances where we are certain that there has been no communication between the cavity of the abscess and the passages I have mentioned; and in certain instances we do not find this particular character, this decomposition or fœtor of the matter, in abscesses that occur in those situations; it is not a constant occurrence even in the circumstances alluded to. It has been supposed that the presence of coagula in the cavity of the abscess may lead to this decomposition, and that the matter becomes fœtid when portions of blood are mixed with it. Now I have sometimes seen suppuration taking place in hemorrhoids about the anus, and there the matter that is deposited becomes mixed with coagula of blood, and in these instances such matter has been excessively offensive; but in certain cases we find the same occurrence where the abscess does not form in the particular situation I have now mentioned, and where no coagulum of blood is mixed with the matter to account for the circumstance. I remember an instance of a boy who came into the hospital with an inflammation over the ascending colon. He said he had had a complaint in his bowels (as he expressed it) some weeks before, and that this inflammation came on subsequently. After he had been in the hospital a few days, there was a manifest fluctuation—it was clear that matter had formed, and accordingly I let it out. The abscess contained about six or eight ounces of white and apparently well formed pus, and it had the fœtid character that I have just mentioned. This was an instance in which the matter had formed near to a portion of the large intestine. I remember an instance of an Irishman, who came to this hospital with a swelling about the middle of the inside of the thigh, which was exceedingly painful, and in which no fluid could be found by examination. A poultice was applied, and other means taken to remove the pain, which was as-

cribed to the inflammation of the part. In a little time it became obvious that there was matter formed, and I evacuated it by a puncture: about two or three ounces of fœtid pus flowed out, mixed with coagulated blood. I also remember an instance of a patient who died in the hospital, in consequence of the inflammation of a vein consequent on venesection. An abscess took place in the upper-arm, which was opened before the patient died, and two or three ounces of matter evacuated, which was excessively fœtid.

You will observe that both the local and general symptoms in cases of abscess, the contents of which present the characters I have mentioned, are very severe. There is high local inflammation, and there is a corresponding degree of general febrile disturbance of the system; but when you come to open these abscesses, you find that the subsequent process is as favourable, and the recovery of the patient is as rapid, as if the pus had not presented the particular character that I have now stated. In short, there is nothing at all unfavourable in this state of decomposition of the matter.

I come next to speak of *chronic suppuration* or *chronic abscess*.

Respecting suppuration, I may repeat the same remark that I had occasion to make on the subject of inflammation—namely, that there are not exactly two degrees of it and no more; we cannot say there is just one degree which is acute, and one degree which is chronic. On the contrary, there are numerous degrees. On one hand you have inflammation in which the matter forms in a few hours, and which will come to the surface and be discharged in two days; on the other hand you have instances in which the formation of matter may take a long time, and in which it may remain for weeks and months without coming to the surface; and between these you have every possible gradation. The local inflammation that precedes the formation of pus in a chronic abscess is so slight, that it escapes observation, and you only become sensible of it when the tumor that is formed by the collection of matter is obvious to the sight.

I remember a medical practitioner bringing to me a youth who was apprenticed to him, and saying, "I wish you would look at a swelling in the thigh." I examined the part, and to my astonishment I found a large abscess. I enquired of my friend how long the youth had been ill, to which he replied he did not know, but he had only complained the day before. I laid open the abscess, and it contained more than a pint of matter. This youth, though in the medical profession, had been following his avocations, and had not mentioned that he had any thing the matter with him.

Some time ago a gentleman consulted me

relative to a tumor in the neck, and said that it had existed there about two years. He was a man of good constitution, and said that it had formed without pain; that he had observed it about the period I have stated, but it had not given him any uneasiness. On examining it, I decided upon making an opening, and found that it contained pus. Thus a chronic abscess had existed there two years, and contained about three ounces of matter, without having produced any active symptom.

In consequence of these collections of matter taking place in so insensible a manner, and being produced by inflammation of so slight a kind, we are liable occasionally to mistake them for tumors of a solid kind; particularly if the cyst which contains the matter should happen to be thick and firm in its texture.—Some time ago a female was shewn to me in consequence of a tumor in the axilla. She had a lump about the size of a moderate apple, firm, hard, and very deeply embedded in the axilla. She was about forty years of age. I examined it, and took it to be a solid tumor. I saw it again at some distance of time, and it appeared to be nearly in the same state. She said that it had never given her any kind of pain. On examining the circumstances connected with its formation, I could not trace any symptom to induce me to think it was not a tumor. I thought it necessary that it should be removed, deeming it to be a sarcomatous growth, and I appointed a distant day for performing the operation. Before putting the patient on the table, I again examined it attentively, and thought that I perceived fluctuation; and hence I was led to take the precaution of puncturing the tumor before commencing the dissection. When I made the puncture, out came a tea-cupful of well-formed matter.

I have seen an instance in the hospital, where a patient has been put on the operating table to have a tumor removed, when perhaps the idea has arisen, on examination, that it contained fluid: thus a preliminary puncture has been made, and matter has been evacuated. I recollect an instance of a patient coming from Wales, who had got a large tumor in her neck. I found it very solid, and no symptom of fluctuation; in fact, I dissected it out, and it was a very painful operation. When the tumor was dissected out, it looked uniform on the surface, and without any particular character. On cutting into it, it was found to consist of a dense cyst, filled with matter.

These cases shew you that matter may occasionally form with very little previous inflammation; and they afford you an important caution in any doubtful case, where you might entertain the idea of its being a tumor, to make a preliminary puncture. This is a safe measure, and which may save the patient the pain and suffering of a severe operation.

Such cases shew you that, in certain cases, although the formation of matter takes place in this insensible way, there may be so much consolidation of the surrounding cellular tissue, as to give rise to the production of a very dense, firm cyst; although generally in chronic inflammation the cyst is thin. In most of the cases that I have mentioned, and in the case of the gentleman in whom the abscess had formed two years, the cyst that contained the matter was so thin that you could not have told that there had been one at all.

In consequence, then, of chronic abscess forming with so little vascular disturbance of the part, and without any of the redness or heat which precedes suppuration in acute inflammation, and also in consequence of their taking place in a limb possessing apparently a natural temperature, they have been called *cold abscesses*, in contra-distinction to the abscesses resulting from acute inflammation, which are called *hot abscesses*.

There is another distinction between the two kinds of abscess, which is in the nature of the fluid they contain.

You will naturally expect that local occurrences, so dissimilar in their character, will produce very dissimilar results. You find, accordingly, that the matter of a chronic abscess is thin, approaching even to what we call a serous character; it is whey-like in its colour and consistency, and contains curdy matter in flakes. These flakes of matter which are contained in a chronic abscess, are sometimes discharged like portions of lymph, the word being often employed in a vague and indefinite way. But sometimes there are large fibrous masses met with in chronic abscesses—that is, masses of a hard or pretty firm fibrous texture. I do not know how to explain these occurrences. They are often large in size, and consistent in their composition, as if they were masses of cellular membrane. The fluid is frequently almost like serum; and it is from these circumstances that the name of *lymphatic abscess* is given to them: that is the term frequently employed by the old and continental writers. The inflammation required for the formation of chronic abscess is much less marked than that which produces the acute, and, as I have said, you will find, in general, that the cyst is much thinner; so that, when you come to examine the circumference of an abscess in the limb, it feels soft, and you might almost suppose that a fluid was contained in the natural texture of the part without being enveloped by a cyst: you do not find that it is walled in, and barricaded by the induration which characterizes the walls or sides of the phlegmonous abscess. For this reason, chronic abscess very easily extends in all directions in its circumference, and is apt to acquire a considerable magnitude, not having any

firm cyst to limit its extent—while it has no disposition to come to the surface. Thus it extends in circumference; and when the advance of the matter is opposed by fascia, as in the thigh, it may pass along the whole length of the limb without being disposed to point: in this way it may extend from the trochanter down to the knee.

Chronic abscesses generally belong to the head of what is called *spontaneous inflammation*—that is, they take place from *internal* causes, which, in most instances, elude our observation. Sometimes, however, they arise from obvious *local* causes. The irritation of a diseased bone, or joint, will produce a collection of matter of this kind. It is a collection of matter of this description, arising from such causes, that is termed *lumbar abscess*; where, in consequence of disease of the vertebræ, in the lower part of the back and loins, matter forms around the diseased part, and then descends, in the loose cellular membrane that covers the lumbar muscles along the side of the pelvis, into the thigh; or it takes its course along the back, and makes its way in different directions within and without the pelvis. Here you observe the feeble barrier which the slight cyst affords to the matter; for pus, which is formed high in the loins, will come down by its weight to the groin, or bore along the thigh nearly to the knee. Hence arises the distinction which is made between abscess of a part and abscess in a part: for the matter that has thus descended from the loins by gravitation into the thigh, can hardly be called abscess of this part.

This disposition to increase, in chronic abscesses, and this want of tendency to come to the surface, renders it necessary that we should discharge their contents by surgical operation. There is hardly any limit to the size these collections may attain, if you do not open them; but there is a difficulty in respect to the measure of evacuating them. When you open a collection of this kind, or when a spontaneous aperture takes place in it, if you proceed as you would in opening a phlegmonous abscess—that is, make an aperture so as to let the matter out, and then cover it with a poultice—the entrance of the air into the interior of the abscess produces decomposition of the matter it contains: this then becomes foetid; the surface of the abscess inflames; the secretion from its sides is altered; it becomes thin and stinking, and excessively irritating to the parts with which it is in contact. The inflamed surface of an extensive abscess thus excited, serious sympathetic disturbance in other parts of the economy occurs—in the alimentary canal, for example, and in the vascular system; and thus arises fever of a peculiar kind. This constitutional disturbance reacts on the local mischief, and the aggravation of the local disease again makes the

constitutional disturbance worse, and thus, between them, the patient is very frequently destroyed.

And here you must consider what I should have mentioned just now, when speaking of the causes of these abscesses. The remote or pre-disposing cause is almost invariably an unhealthy state of constitution. You find these abscesses occurring, not in healthy individuals, but in those whose constitution is naturally feeble; more especially in such as exhibit what is called technically a *scrofulous* disposition. You have to contend therefore, in these cases, both against the local mischief and against the bad state of constitution in which this local mischief has its principal origin. It is very desirable, then, to get rid of the contents of an abscess of this kind without incurring the risk of the evils that I have just alluded to. The particular mode of proceeding adopted by Mr. Abernethy, was designed to avoid this risk; and, in point of fact, you will find that, by proceeding in the way he has described, you may puncture the abscess, and get rid of the contents, without incurring the danger of inflammation of the cyst, or the constitutional effects to which it gives rise. His mode of proceeding consisted of making a small aperture into the abscess, allowing the contents to escape gently, and without suffering any introduction of air into the cyst; then closing the opening by adhesive plaisters, and thus putting it in a situation to be united by adhesion. In order to employ this mode with greater skill, he has stated that the skin should be drawn aside, so that when you let the skin go, the opening in the cyst and the skin should not correspond—that is, you make the opening valvular. After the abscess has been opened in this way, the matter will form again, and the necessity for repeating the puncture will arise several times. Under favorable circumstances the abscess will become limited in size, in consequence of these punctures. Its parietes contract when the quantity of its contents is diminished; and thus you bring it to so moderate a size that you make an opening in the usual way, and trust to the cure in the same manner that phlegmonous abscess would be healed. Such is the process when it goes on favourably. Of course you cannot expect such effects to be always produced in lumbar abscess. This mode of treatment is calculated to obviate the inconvenience that arises from exposing the abscess to the air; but the disease seated in the vertebræ, or adjoining parts, are sources of danger that require to be obviated by other means.

In conjunction with the means that you adopt locally in the treatment of chronic abscesses, you may at once resort to those which are favourable to the re-establishment of the

general health, and the improvement of the constitution. You would give the patient the benefit of a residence in pure air; you would attend carefully to the diet, seeing that it was light and nutritious; you would pay attention to the stomach and bowels, and to all the circumstances that contribute to promote health.

When the matter of a chronic abscess has been let out, in consequence of the cyst having but little disposition to take on the actions which would tend to obliterate its cavity, it is sometimes advantageous (if the nature of a part in which the abscess is seated will allow of it) to subject the part to pressure, and thus to promote a disposition to contract. Where a chronic abscess is seated in one of the limbs, a bandage may be applied over the part from which the matter has been so evacuated. Still an abscess of this kind very frequently remains in a state of fistula, and often the fistula is very considerable. Under such circumstances we occasionally succeed in accomplishing the cure by introducing a seton through the tract of the fistula. The presence of the seton excites active inflammation in the sides of the cavity: after this is produced, the seton may be withdrawn; and by pressure applied to the sides, they will frequently adhere together. Sometimes irritating fluids are introduced into the cyst, such as a solution of sulphate of zinc; but you must be cautious of doing this, and not think of irritating the sides of a cavity of this description where it is considerable: it can only be safely applied where the sides are of limited extent; or, failing this, it is necessary to keep up an opening till the parts heal from the bottom, and this is a mode especially adopted in those cavities which take place after the bursting of a phlegmonous abscess.

The constitutional disturbance which takes place when inflammation arises in the cyst of a chronic abscess, and when a copious suppuration occurs, is of that nature which is called *Hectic fever*.*

Hectic fever is a constitutional disturbance arising in a system weakened by long continued and serious local disease; more especially when such local disease is attended with suppuration. Hence it has sometimes been called *suppurative fever*. But the name seems to be objectionable, because suppuration very commonly occurs without any thing like hectic fever; and, on the other hand,

hectic fever may take place where there is no suppuration.

Hectic fever occurs in various *medical* as well as *surgical* cases. In extensive disease of the lungs you may have fever of a hectic character, without its having proceeded to suppuration; and you may have all the phenomena of hectic from affections of the large joints, where suppuration has not taken place. In various serious injuries, such as a bad compound fracture, it will generally happen that violent inflammation will take place in the limb; and, in conjunction with the serious local disturbance produced in that way, there is a corresponding inflammatory fever. Matter forms in consequence of the inflammation, which then generally becomes lessened. Subsequently inflammation will sometimes recur, and a fresh formation of matter take place; and fresh febrile attacks accompany it. In this way the strength of the patient becomes considerably reduced, and, after a length of time, the state of disturbance in the part becomes altered; the limb is not only swollen and red, and the seat of successive phlegmonous abscesses, but it is perhaps œdematous. Instead of having a firm tumefaction surrounding the abscess, and instead of having a formation of healthy pus, the parts will become flabby, and perhaps a discharge of thin matter takes place. With this change in the local symptoms, there is a corresponding alteration in the general system. The local disease has from an acute taken on a chronic character; and a similar alteration occurs in the febrile symptoms. The patient now has hectic—that is, a kind of chronic fever. In hectic fever, whether it arise in consequence of the change in the state of the local symptoms proceeding from severe injury, or whether it be connected with the irritation arising in the cyst of the abscess, or whether it depend on a disease in some important organ of the body, such as the lungs or joints, we find there is a considerable disturbance of the circulation. The pulse is accelerated, so that probably it rises from 100 to 120 and upwards; and it often remains for weeks, or even months, at 120, without sinking beneath this. The patient sometimes feels heated, and at others chilled; the surface of the body is sometimes red and flushed, and at other times pallid and cold; and frequently it is bathed in profuse perspiration. Slight degrees of exertion are sufficient to bring on flushing, which ends in perspiration. The tongue is moist, and perhaps clean. The functions of the digestive organs are frequently disturbed; and towards the latter part of the affection diarrhoea comes on, and can hardly be restrained. The perspirations that take place in the latter stages are profuse; as is likewise the discharge from the bowels. Hence this is called *colliquative sweat* and *colliquative diar-*

* The following observations on Hectic fever were made by Mr. Lawrence at the commencement of the Lecture which is to follow the present; but as their omission was accidental, and as the Lecturer stated "that they should have come before what he had to offer on Mortification," and requested that they might "be put in their proper place," we have thought it right to do so accordingly—reserving the subject of Mortification, to which Mr. Lawrence had proceeded, for the next lecture.—E. G.

firm cyst to limit its extent—while it has no disposition to come to the surface. Thus it extends in circumference; and when the advance of the matter is opposed by fascia, as in the thigh, it may pass along the whole length of the limb without being disposed to point: in this way it may extend from the trochanter down to the knee.

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Hectic fever is a constitutional disturbance arising in a system weakened by long continued and serious local disease; more especially when such local disease is attended with suppuration. Hence it has sometimes been called *suppurative fever*. But the name seems to be objectionable, because suppuration very commonly occurs without any thing like hectic fever; and, on the other hand,

hectic fever may take place where there is no suppuration.

Hectic fever occurs in various *medical* as well as *surgical* cases. In extensive disease of the lungs you may have fever of a hectic character, without its having proceeded to suppuration; and you may have all the phenomena of hectic from affections of the large joints, where suppuration has not taken place. In various serious injuries, such as a bad compound fracture, it will generally happen that violent inflammation will take place in the limb; and, in conjunction with the serious local disturbance produced in that way, there is a corresponding inflammatory fever. Matter forms in consequence of the inflammation, which then generally becomes lessened. Subsequently inflammation will sometimes recur, and a fresh formation of matter take place; and fresh febrile attacks accompany it. In this way the strength of the patient becomes considerably reduced, and, after a length of time, the state of disturbance in the part becomes altered; the limb is not only swollen and red, and the seat of successive phlegmonous abscesses, but it is perhaps œdematous. Instead of having a firm tumefaction surrounding the abscess, and instead of having a formation of healthy pus, the parts will become flabby, and perhaps a discharge of thin matter takes place. With this change in the local symptoms, there is a corresponding alteration in the general system. The local disease has from an acute taken on a chronic character; and a similar alteration occurs in the febrile symptoms. The patient now has hectic—that is, a kind of chronic fever. In hectic fever, whether it arise in consequence of the change in the state of the local symptoms proceeding from severe injury, or whether it be connected with the irritation arising in the cyst of the abscess, or whether it depend on a disease in some important organ of the body, such as the lungs or joints, we find there is a considerable disturbance of the circulation. The pulse is accelerated, so that probably it rises from 100 to 120 and upwards; and it often remains for weeks, or even months, at 120, without sinking beneath this. The patient sometimes feels heated, and at others chilled; the surface of the body is sometimes red and flushed, and at other times pallid and cold; and frequently it is bathed in profuse perspiration. Slight degrees of exertion are sufficient to bring on flushing, which ends in perspiration. The tongue is moist, and perhaps clean. The functions of the digestive organs are frequently disturbed; and towards the latter part of the affection diarrhoea comes on, and can hardly be restrained. The perspirations that take place in the latter stages are profuse; as is likewise the discharge from the bowels. Hence this is called *colliquative sweat* and *colliquative diar-*

* The following observations on Hectic fever were made by Mr. Lawrence at the commencement of the Lecture which is to follow the present; but as their omission was accidental, and as the Lecturer stated "that they should have come before what he had to offer on Mortification," and requested that they might "be put in their proper place," we have thought it right to do so accordingly—reserving the subject of Mortification, to which Mr. Lawrence had proceeded, for the next lecture.—E. G.

rhœa—which term merely means melting; the substance of the body, as it were, melting away under the profuse discharge that takes place. The patient is generally restless and uncomfortable at night. The symptoms in hectic do not remain stationary through the 24 hours; on the contrary, there is, more particularly towards the morning, a visible remission of the paroxysms. Towards evening the pulse becomes accelerated, the body heated, and the patient feels restless and uncomfortable. In the course of the night he probably becomes bathed in a profuse perspiration, from the disturbance of the circulation terminating in that way. In the morning he is comparatively free from fever, and remains so through the day. Such are the principal features of that state which constitutes *hectic fever*.

It has been made a question, whether hectic fever can be cured. The question is, whether you can cure the disease that causes these symptoms; whether you can remove the local excitement which produces the general disturbance that I have now spoken of. If you can do this, you can cure hectic fever. But, in most instances, the local disease is of a very serious kind, frequently uncontrollable, and if you cannot put a stop to that, neither can you put a stop to the constitutional symptoms which it excites. You cannot expect that hectic fever can be cured while the causes that have given rise to it remain in full force. But in cases where the cause is such as to admit of removal, as, for example, in a severe disease of the joint of the knee, which may be removed by amputation, you will find that all the worst symptoms of hectic will speedily cease when the source of irritation is gone; you will find that the patient then obtains rest, his appetite returns, and, in fact, his strength is speedily recovered.

What, then, is the treatment that is suitable to hectic? If you regarded merely the state of the vascular excitement, you might suppose that it would be necessary to adopt some means that might directly diminish that excitement, but you must take into view at the same time the condition of the patient in other respects. No powerful means—no direct kind of depletion, would be borne; they would merely lessen the powers of the system without doing good. Your object, in fact, is to sustain the strength of the patient—to keep up the powers by means that do not at the same time excite. You would then be inclined to give the lighter kind of tonic medicines—the dilute mineral acids, with light bitters, such as bark and cascarrilla. You would let the patient take, in small quantities, light, but nutritious diet. The dilute muriatic, and the dilute sulphuric acids, possess as much power as any means you can employ in checking the profuse perspirations which are often so troublesome in

hectic. When a patient is unable to obtain rest—when he passes uncomfortable nights, you may occasionally see it necessary to administer narcotics. It is on the whole a kind of temporizing plan, in which you endeavour to administer mild remedies to support the strength, without adding to the excitement.

ON THE TREATMENT OF ASPHYXIA FROM DROWNING, &c.

HAVING frequently experienced considerable embarrassment in my endeavours to establish the resuscitative process in cases of asphyxia from drowning, intoxication, &c. I have been led to consider how that process may be best simplified, so as to be performed with the least possible delay, where even the apparatus of the Royal Humane Society is not to be procured.

It is much to be deplored that there are not regularly-established receiving stations, as near as possible to every place of danger, and at all times *amply furnished* with the means of applying artificial heat *simultaneously*, with every other requisite for the successful inflation of the lungs, &c. For want of such accommodation, I verily believe that in nine cases out of ten either these means are not attempted, or the attempt is so inefficiently made as to afford not the smallest chance for the recovery of the individual; while the operator is placed in circumstances of the greatest possible embarrassment. Let the reader imagine an unfortunate individual taken out of the water, perhaps after only five or ten minutes submersion, and after some delay conveyed to a public-house. Some publicans refuse to receive them; and those who do (at least many of them), afford not the smallest convenience or accommodation, from an idea that there is no one to indemnify them for the trouble and expense likely to be incurred*. Under these circumstances,

* As the following excellent rule of the Society cannot be too generally known, I take the liberty of inserting it.

"Rule 6.—That remuneration† be given to any publican, or other person, who shall admit the body of any object into his house without delay, and furnish the necessary accommodations, and that they may be secured from the charge of burial in unsuccessful cases."

† "One guinea is always paid to a publican who readily takes a body into his house, with the hope of recovery."—*Annual Report*, 1829, p. 71.

a medical man is called to pronounce on the life or death of the individual, or to employ the means recommended by the Royal Humane Society, in a place wherein he has no authority or command, surrounded by a crowd of useless idlers (men, women, and boys), in the tap-room of a public-house. Perhaps, by way of appearing to do something, a vein is opened (a practice, however, very seldom proper), or he makes an attempt to inflate the lungs, with such means as are in his power, and finds the mouth, nose, fauces, and trachea, occupied by frothy mucus, water, and the *contents of the stomach*; not a rag nor a blanket is to be had, and he is reluctantly obliged to abandon the sufferer to his fate. I would gladly prevent the repetition of such an unfortunate result, in every case wherein the circumstances seem to promise the most distant hope of recovery.

I have always considered it to be of primary importance to obtain, as quickly as possible, a source of artificial heat; and the difficulty of doing this, in general, is the principal cause of failure; for though the restoration of respiration will bring with it the restoration of animal heat, yet before this can be effected, the body, in most cases, becomes too cold for artificial inflation alone to restore its temperature. It is important to husband the small remnant of vital warmth, by preventing evaporation from the surface, either by drying the body and covering it with warm blankets as speedily as possible, or by immersing it in a warm-bath. In general the body is exposed naked too long, or the wet clothing is suffered to remain about it, from the ignorance or apathy of the by-standers, &c. Frictions of any kind are of no avail until the skin has regained, with its warmth, its susceptibility to stimulation, and are, moreover, rather an impediment; as the body is almost necessarily too much exposed, and time is misemployed; or lost.

The remedy for this great impediment to the successful performance of the resuscitative process, is not within the power of individuals in the situations wherein these accidents are of most frequent occurrence; and it is a subject worthy the consideration of the heads of the new police, or of the parochial authorities in every place, whether it be not possible, as well as highly

desirable, to appropriate some small building, or room, additional to the watch-house, or other more convenient spot, to this especial purpose. I think it would not be difficult to contrive, with great economy, a kind of artificial hot well, which should at all times be ready for use, and would only require to be visited once in twenty-four hours, or even less frequently, to see that it is in order. I would propose a room about twelve feet square, to be furnished with the means of procuring and keeping ready oxygen and hydrogen gases; the former for inflating the lungs, the latter to keep a body of water constantly at the temperature of 98° Fahrenheit at least, with power of increasing it at pleasure at a minute's notice. Indeed they might be built on a smaller scale, and every light-house, harbour, or convenient station along the sea-coast, and in the course of rivers, &c. might be thus provided in the manner of Martello towers; or even on board ships a place might be set apart for these purposes.

It is very seldom, indeed, that the practitioner has it in his power to avail himself of the important agency of the Galvanic fluid; neither could a single person, with the ordinary apparatus, attend to this, while all his attention is engrossed by the endeavour to restore respiration. But this may be obviated, in some degree at least, if not very efficiently indeed, by lining the bottom of the bath with woven copper wire-work, in the manner of a bed-sacking. The body being laid upon this, and the water let in, should then be covered with a similar piece of work, but flexible in the manner of mail, of zinc wire; by which means a simple galvanic circle would be formed between the two metals and the water, and a current of this energetic fluid would pass from the one metal to the other through the whole body, the respiratory process being *uninterruptedly* carried on at the same time.

In addition to which I have devised, for the same purpose, a very simple, and, as I hope, valuable instrument, capable of being instantly and efficiently employed in all places, even where the former means cannot be obtained. I have before observed, that the ordinary attempts at inflating the lungs are often defeated by the contents of the stomach occupying the mouth, nose, and

fauces, choking the instrument, and perhaps getting into the trachea itself, on the first attempt to expel the air from the lungs by pressure upon the abdomen.

In order, then, to carry on the inflation of the lungs *without interruption*, and to stimulate the stomach at the same time, I propose a silver tube to be passed into the stomach, and retained there; its lower orifice should be large, so as to admit the solid as well as the fluid contents of the stomach to enter it. The stomach-pump is then to be attached, and the stomach emptied as speedily as possible. A cordial may then be injected through the tube, which is not to be withdrawn. To its upper extremity may now be attached the remaining portion of the instrument, which consists of a flat piece of zinc, bent to the curvature of the neck and chest, intended to lie flat on them, and to terminate at the scrobiculus cordis, in an expanded plate of the same metal. The upper part of this piece of zinc to be furnished with two handles, crossed in the manner of a pair of forceps, one of zinc, the other of silver; which is made to be easily attached to the œsophagus tube, as a bayonet is locked upon a musket barrel. The whole instrument thus forms a large pair of forceps of a rather singular aspect. On gently compressing the handles (which should be of glass, or any non-conducting substance), the blades will be approximated as near as is desirable, and all the important organs included between them be subjected to the stimulus of a simple galvanic circle, thus formed between them and the two metals.

And now let the anatomical reader reflect on the number and importance of the vital organs included in this circle of action. Besides the œsophagus and trachea, the heart and lungs, the diaphragm and its nerves, the stomach and its nerves, branches from the hepatic plexus, and other portions of the great sympathetic apparatus. The position of the body all this time is semi-recumbent, sitting or reclining in the bath, with the head and shoulders elevated, and placed in such a position as will bring the mouth, œsophagus, and stomach, as nearly as possible into a straight line. Some unusual difficulty may be anticipated in passing a rigid tube into the stomach, but when the passive state of the body is recollected,

and the usual directions for passing the œsophagus bougie are observed, viz. to keep the instrument against the back part of the pharynx, and the mouth in a line as near as possible with the cardiac orifice of the stomach, the most inexperienced person, acquainted with the anatomy of the parts, will scarcely be disappointed. But as it may be desirable that persons, not supposed to possess that knowledge, may be instructed in this particular, plain directions, with a description of the relative position of the parts concerned, and their separate office, should accompany the instrument.

The zinc portion of the apparatus is curved laterally to the left, so as to lie out of the way of the pomum Adami, for the following reasons:—The usual mode of inflation cannot be resorted to in conjunction with the means above described, as the mouth and nose are necessarily left free and open. But a more commodious method of inflation may be *simultaneously* carried on, in the following manner:—An opening is to be made into the larynx with the point of a lancet, just above the ewer-shaped lip of the thyroid cartilage; a small tube, formed with a shoulder, is to be introduced, and an elastic gum gas-holder, furnished with a stopcock, and filled with oxygen gas, is to be attached. On the opposite side also a similar one may be attached, distended with atmospheric air, so as to dilute the pure oxygen to any required degree, regulated by the turning of the cocks: a change of these vessels will be required to be kept up, and where oxygen gas cannot be obtained, they may both be kept filled with atmospheric air, by means of a common air syringe, and thus form, by their gentle and equable action, a method of inflation more nearly resembling natural respiration than the bellows are capable of, and which may thus be superseded altogether. This mode of laryngotomy is no new operation. It has been constantly and strenuously recommended by my worthy and respected preceptor, Mr. Brookes, in his lectures, not only as a facile mode of access to the trachea, but as being free from all risk of dangerous hæmorrhage, to which the usual operation of tracheotomy is liable; and because of the vicinity of the chordæ vocales, or ligaments of the glottis, parts so very sensitive as to retain their

excitability much longer than others; So that on all accounts it is an operation that deserves to be extensively known, and more generally practised. It is very safe, and may be performed with confidence by a tyro in anatomy.

A doubt may arise in the minds of some persons whether the galvanic action may not be too powerful; but it is in some degree limited, by the necessary size and form of the œsophagus tube. The number of square inches of zinc can be very easily regulated. However, if it be found tolerable in the living or healthy body, of which I have little reason to doubt, it cannot be too strong under the circumstances of asphyxia. On the other hand, should it prove to be too weak, I think means may be found of greatly increasing the metallic surface, internal as well as external. The common electrical machine is quite inapplicable to these cases, because (independently of its expensiveness) of the utter impossibility of keeping it ready for immediate action under all the circumstances of time and place.

Recapitulation.

The body, if clothed, to be immediately stripped and immersed in the warm bath, or in its absence, to be dried and placed in a warm bed. The tube to be passed into the stomach as speedily as possible, and the contents to be withdrawn. It will often be found full of food; for a full stomach contributes to the facility of drowning, by increasing the specific gravity of the body. The galvanic action to be commenced at the same time, by attaching the blade or limb of zinc, the skin beneath which should be moistened with a warm sponge (where the bath is not used), or with a little liquor ammoniæ or culinary mustard, and a cordial of hot brandy and water, with a tea-spoonful of mustard, to be injected into the stomach.

Laryngotomy to be performed, and the lungs inflated in the manner herein recommended. This process to be continued until respiration is fully re-established. The heat of the bath to be gradually increased, and kept up to 120° of Fahrenheit. When the patient is considered to be sufficiently restored, the body is to be rubbed thoroughly dry, and placed in a warm bed. A gentle anodyne may then be administered, and half a pint of warm gruel, in

preference to tea or spirits. The patient should be carefully attended during sleep, and until healthy actions are completely re-established. I have found the tin bottle, called a stomach-warmer, of great utility; I therefore recommend this to be applied, and bottles of hot water laid at the feet, &c. when the patient is put to bed.

In conclusion, let me observe, that I have written this paper with the distant hope of drawing the attention of local authorities, and the public in general, to this, now rather neglected, department of practical medicine. That an apathy pretty generally prevails on this subject will, I think, be conceded to me. Perhaps it is to be attributed to the great increase of population of late years that the value of human life is depreciated, and from the same cause the profession of physic suffers a corresponding depression. But there is a singleness of purpose comprehended in the prevention and cure of disease, and the saving of human life, which should at all times actuate the professors of our art. I am aware how difficult in execution some of my plans will be found, unless they are seconded by influential persons in every part of the kingdom. Another great difficulty will be to interest medical gentlemen themselves sufficiently, to give up so much of their time and thoughts as the subject requires; for few men are called on to make greater sacrifices than they, and there are few that can afford to do so without any prospect of an adequate remuneration. As a means of meeting this difficulty, I will avail myself of a suggestion of my friend, Mr. M. Blood, who proposes that there should be a sprinkling of medical officers appointed to the superintendence of these and similar matters in the new police, who should take their rotation on duty, so that no case should by possibility escape their vigilance, or miss the opportunity of a prompt and vigorous application of the means therein recommended. It may reasonably be doubted whether medicine, or questions connected with it, are, at the present time, fit subjects for the consideration of the legislature, as this depends on the value, for the time being, of human life. That this is relatively smaller now, in a time of profound peace, with a superabundant population, than at any other period of our history, may be attributed also in a very

great degree to the advanced state of the science of medicine. But in proportion as the value of human life diminishes politically, so it becomes of greater importance individually, and behoves each of us to inquire into the resources whereon we are to depend in the event of dangerous accident or disease. Yet it is seldom that men can be induced to provide against a remote and contingent danger, while in the enjoyment of perfect health, and these are evils only felt when they come home to our own doors. And finally, I solicit the attention of the profession and the public, with deference, to these or similar measures, because the chief excellence of any good consists, not in its peculiar richness, rarity, or even in its abundance, but in its ubiquity, and that at the precise time when it is most required.

HENRY BOND.

P.S. The instrument may be had of Mr. Stodart.

OPENING OF THE MEDICAL SESSION IN DUBLIN.

*To the Editor of the London Medical
Gazette.*

SIR,

No good reason, I presume, can be assigned why the medical session commences so late here—a full month, and more, after the commencement of business in London. Old prescription, and university custom are, perhaps, the best that can be given. Medical education, however, can hardly be much longer confined within its present narrow limits: increased and multiplied as its objects have become, six months out of the twelve are quite insufficient for the purpose. Our medical reformers and modern economists of time, would do well to look to this. It is a fond notion to talk of the necessity of relaxing after the winter campaign—of laying in a stock of health during the summer months—that those months are unfit for dissection, &c.; all so many pleas for idleness. In the olden time, indeed, our sapient and grave forefathers took ample “time to play;” all they had to teach, could very well be taught in a few months; lectures were exhausted before the spring was expired, and the *long vacation* was a necessary consequence of having nothing to do. In the great

seats of learning the same strenuous idleness still prevails; but it is a bad precedent for our profession—the beaten track is no longer advisable, or safe. Why may not our professors exchange partridges for pupils on the first of September, and favour us with nine months’ courses? I leave the consideration of the project with their gravities.

An obvious consequence of this tardy opening of the session is, that the students are not steadily at work till after the holidays. What with the public lectures, and the bustle and arrangement of entering on business, December is come before their hands are rightly in. This is a serious loss of time, which is not sufficiently attended to.

A rumour was afloat here lately, that the terms were to be raised in all the schools this winter. I find it is not true: and yet, if both Dublin and Paris were to take advantage of the present state of things in Britain, it were not to be wondered at. It is all quite fair in trade, as the world well knows, to make the most of the market; those who command the supplies, may also command the price of the commodity; nor will the traffic in the dead be found to differ much from other kinds of traffic. Among the “uses of the dead to the living,” this has, I think, been rather overlooked; this curious feature in the history of modern times—the *profitable* trade so extensively driven in human flesh. Long ago, the mummy system was profitable. “Mizraim cured wounds, and Pharaoh was sold for balsams;” but these worthies were stale for our markets. We want the flesh, recent and succulent, almost as Shylock himself would have it; and such, it seems, we can have at any time for our money; thanks to the glorious condition of the statutes! Dublin has always been well supplied, and has been able to supply a neighbourly share to the sister kingdoms, and for a reasonable “condition;” little more than prime cost. But ought they to grumble if the markets rise ere long? Common sense would dictate the prudence of profiting by the occasion; and the circumstances of the late anatomical bill (exclusively for the benefit of Great Britain—poor Ireland being left to shift for herself!)

* Sir A. Cooper’s evidence before the Anatomical Committee is here referred to.

might provoke a reprisal. Yet she has taken no ungenerous advantage—"her commercial relations remain unaltered."

The public lectures are a prominent object in the opening of our session. In imitation of the university course, originally intended for the students in arts, but long since liberally thrown open to the public at large, a certain number of free lectures are annually given in each of the schools in Dublin. In this respect, perhaps, no city in the empire has more opportunities afforded its inhabitants for cultivating a general acquaintance with the various branches of natural science: the professors of anatomy, chemistry, botany, mineralogy, and mining, connected with our well-endowed establishments, devote every year a certain portion of their labours to the diffusion of useful knowledge among the people. But what costs little, is seldom estimated at much; and it is to be apprehended that the gratuitous offering of this instruction does not contribute much to the enhancement of its reputed worth. This may be one cause why, in so populous a city, so small a proportion of general auditors is to be observed in our medical theatres, even on occasions when the public are invited to attend; a circumstance the more remarkable, as so large a number of medical students (probably seven or eight hundred) assemble every winter in Dublin, and cannot but contribute to keep public interest alive with respect to the profession. The chief cause, however, I suspect, is to be traced to the professors themselves: with a very few exceptions, there is a lamentable lack of spirit among them; and of that spirit-stirring talent which is so necessary for drawing together and entertaining a popular assembly. They want the elements of usefulness which professional enthusiasm and native eloquence can alone supply; and I may add, that exuberance of general knowledge so indispensably requisite for the illustration of medical topics. They cannot, they will not break, the numbing spell that binds them; nor will they step beyond the magic circle of routine to which they have been so long habituated. By habit, converted into mere machines—a sort of barrel-organs—they throw off a stated number of soporific tunes, and there they stop, until again set a-going to pursue the same perpetual round. It is unplea-

sant to be obliged to pronounce so sweeping a sentence on the Irish professors; exceptions there are, undoubtedly—but only just so many as to establish the general truth of the position. At the present moment it would be criminal to suppress the fact, when it is universally understood how fair a field is thrown open to the active energies of men of talent. The materials are ready; the impulse of the master-mind alone is wanting, to quicken and rouse them into life. In a word, sufficient excitement is abroad; the desire of knowledge is abundantly manifested; society is prepared for improvement, but the sources are miserably dried up: and in ministering to this epidemic thirst, how admirable an opportunity is afforded the able and judicious teacher of medicine, to dispel the mists of ignorance and error; to beat down prejudices beneath his feet, and to raise up medicine to its rightful place on the pillar of popularity. Genius could not be applied to a nobler object. Taste, talent, learning, and eloquence, might all be enlisted in the cause; nor could they have a prouder arena for their display.

The late recurrence of the annual public courses naturally gives rise to these remarks. It is strange that any thinking person should be so shortsighted as not to be sensible of the good effects which these courses, well managed and directed, might be so ordered as to produce. There are ebbs and flows in public feeling, and the different branches of knowledge are subject to vicissitudes. The prevailing taste, at present, is decidedly for natural history. The general facts of zoology in particular, and comparative anatomy, seem to enjoy a remarkable currency in our educated circles. It amounts, indeed, I would almost say, to an influenza; in fact, it is *the rage*. Nor is it confined, it would seem, to this kingdom alone; the popular writers of Great Britain are sensible of the reigning predilection, and the press teems with innumerable productions in accordance with public feeling.

By a sort of coincidence, rather accidental, perhaps, than designed, the College of Surgeons here have directed their professors to deliver twelve lectures annually, on the subject of comparative anatomy, preliminary to the usual anatomical course; and however ridiculous it may seem, to enter upon

the study of anatomy by engaging at once in its most intricate and extensive consideration, and to pretend to convey even a smattering of it in twelve lectures, yet the measure is not undeserving of some credit. It has secured a certain portion of popularity already, and no doubt, in time, may prove useful, when it has received those improvements of which it is so susceptible. On the recent occasion, Dr. Jacob, the Professor who *opened* in the School of Surgery, aware, it is to be presumed, of the difficulties he had to encounter, contented himself with lecturing on the invertebrated animals of Cuvier; and he had, of course, more than enough to do, to dispatch even those three lowest classes of the general division. I must confess, however, that I feel strongly inclined to doubt the utility of the whole undertaking: it is extremely questionable whether any of his auditors, except those of a certain standing, were edified by his labours; the general auditors, unconnected with the profession, certainly were not. Perhaps, too, it were more wise of Dr. Jacob to have adopted some simpler classification than that of Cuvier; that is, supposing Dr. Jacob more willing to profit than to puzzle his auditory. The adoption of it naturally and necessarily occupied much time in defending its complicated refinements, and explaining its absurd nomenclature; the latter, the lecturer himself seems not yet sufficiently to have mastered. How much too of his introductory lecture might have been spared! Instead of the "very few words" with which he proposed to preface his subject, we were treated to a critical essay on the merits of Haller and of John Hunter. Then we had the Baconian text, that "knowledge is power," amply descanted on; and we were gratified with the information, that "a man who walks the streets in rags, if he have knowledge, has rank in society." Comfortable and encouraging assurance to the medical aspirant! I recollect, too, a curious, and to me, I confess, a *new and wonderful* piece of intelligence communicated at this lecture. Here were we for the first time taught, that the organic life of an individual might be extinct, while the animal life still remained; and that, too, in great perfection:—"For instance," says the professor, "in the last stage of phthisis, for some time be-

fore death, the heart has ceased to beat—absorption no longer goes on—digestion, respiration, and the other functions, are no more—yet the individual enjoys his intellectual faculties; he converses most rationally with his assembled friends," &c. This appears to me to be quite original; and I am anxious to secure to Dr. Jacob his right of property in it: certainly Bichat never dreamt of such a combination in his ingenious speculations on life and death.

To what will this love of paradox come at last? That any Munchausen tale may be safely started, and will be most assuredly gulped down by an admiring crowd, gaping for novelties, has now been fully proved. Let young professors profit by the knowledge of the fact; and if they do not succeed in satisfying their auditory, and in attaining high eminence as lecturers, why they have no romance in their heavy constitutions,—that's all.

With far more discretion, and infinitely better judgment, Dr. Macartney improved the opportunity which lay open to him. Sensible of the prevailing mania for zoological inquiry, and of the absurdity, and indeed the impossibility of attempting to enter on a system within the limited period, he chose rather to take up a part—a small, though a most important part of the general subject. The anatomy and physiology of the senses, illustrated from the stores of his accumulated knowledge, formed the subject of *his* course; and perhaps a tissue of more valuable matter was never laid before the public within the narrow compass of twelve lectures. After a masterly view of the nervous system and of the functions of the brain—in which the phrenologists were not forgotten, (by the way, Dr. Macartney has never been seduced by the plausibilities of these enthusiasts)—the five senses, in the order of feeling, taste, smell, hearing, and sight, were treated with singular ability. Nor let it be deemed a task of little difficulty to do this well; for it is the privilege of men of superior talents alone to form those comprehensive views which guide them in the diffusion of precise and useful information. The ease too, the fluency, and the aptness of expression in which they are conveyed, render Dr. Macartney's lecture popular that can be con- ever tire, their inter-

he should be heard repeatedly on the same topic, he is ever original—ever new. Anecdote, history, personal experience, and acute criticism, are brought to bear on every subject, however dry in other hands, and are poured out in boundless profusion, whilst with the grand object—utility, ever in view, he never confounds his unprofessional hearers with the verbiage of technicality. Opposed to all idle display on these tempting occasions, he merges his superior claims as a comparative anatomist, and author of the best articles on the subject in our language, and presents himself in his crowded theatre with the unaffected plainness and unembarrassed self-possession of a man of genius. His language is always appropriate, chiefly conversational, or in the form of interesting narrative. It is, however, occasionally elevated with his theme, and in the ardour of vindicating the dignity of his profession. With pride we heard him, at the close of his introductory lecture, in energetic terms, allude to the lustre conferred on moral science by medical men, and we felt the animation with which he referred to the labours of “Aristotle, a working anatomist—and John Locke, a practising physician.” Nor should we overlook his zeal in the promotion of his favourite design—the removal of that prejudice and error which so generally exist in society with regard to the practice of dissection. He has always some pithy argument wherewith to pose his babbling adversaries. I recollect upon one occasion lately, in the public course, he hinted at the propriety of our learned judges being made aware, that “much of the silly nonsense they deliver from the bench against the practice of anatomy, is uttered by means of dead men’s teeth; and the ladies too, who sometimes indulge in fantastical remarks on the same subject, ought to be reminded, that much of their beautiful hair and their white teeth, of which they are so proud, are, in truth, the property of the grave!”

I shall close this paper with a brief allusion to what took place at the College of Surgeons on the last day of the public course. According to the sentence of the law, and that obnoxious portion of it which would surely be “more honoured in the breach than in the observance,” the bodies of the murderers, Magrath and Mellon, were

conveyed from the gallows to the College of Surgeons for dissection. The usual galvanic experiments were performed on them by Dr. Apjohn, in presence of a thronged assembly; and Dr. Ure’s celebrated processes were attempted to be verified. Every circumstance seemed favourable for a fair trial—the bodies had not been suspended for a longer time than Clydesdale’s, nor were the cervical vertebræ dislocated. But the efforts to produce respiration, much more to restore life, were utterly vain. The common contractions were very well displayed, and the effects produced upon forming a circuit between the supraorbital nerve and the heel, were rather striking and remarkable. For all the good, however, that resulted from this experimental exhibition, it might as well have been let alone; and I will add, that a nobler use might have been made of these murderer’s bodies. Here was a fine opportunity afforded the professors of the school of surgery to display a disinterested regard for the credit of their art. By the sacrifice of a few paltry shillings (the perquisite of the pair of murderers was not worth more than thirty,) they might have proclaimed to the world that *dissection* was *no punishment*, and if it were, that they disdained the executioner’s office, or one still more odious than the hangman’s. They should have declined being “finishers of the law.” But, no doubt, the sweet savour of the prey was irresistible:—

As when a flock
Of ravenous fowl come flying, lured
With scent of living carcasses, designed
For death the following day, in execution:
So scented th’ anatomists, and upturned
Their nostrils wide into the murky air,
Sagacious of their quarry. MILTON.

Certainly, with the evidence of the most respectable members of their profession before their eyes—unanimous as to the folly and wickedness of countenancing the obnoxious clause in the murderers’ sentence—the anatomists of the school of surgery in Dublin clearly stand convicted of having acted an unworthy part. It was, to say the least of it, an ill-advised proceeding to accept those bodies for dissection.

Yours, &c.

EBLANENSIS.

Dublin, Nov. 24, 1829.

COLLEGE OF SURGEONS.

To the Editor of the London Medical Gazette.

SIR,

I HEARTILY congratulate yourself and the public upon the almost complete subversion of that mischievous publication called the *Lancet*, which has been effected through the means of your *Gazette*. But though, to speak technically, you have removed the predisposition on the part of the profession to be infected by that envenomed instrument; and whenever it has been insidiously employed in its former practice of slanderous inoculation, you have speedily supplied the antidote; yet, in my opinion, more is still required to be done. The *Lancet* has defamed many institutions and persons of well-merited respectability; and though such slander can produce no permanent effect, yet a tarnished character does not speedily acquire its former manifest perfection and brilliancy. The aspersions wear off by degrees, but whilst any stain remains the party is liable to suspicion. If, therefore, the respectability of a slandered institution be of importance to the public, such stains should be removed by a speedier process than that of the slowly moving hand of time.

The Editor of the *Lancet*, and his coadjutors, have strongly censured the conduct, and scurrilously misrepresented the motives of the Directors of the Royal College of Surgeons in London, so as to prejudice a considerable party of its members against that institution. Now, should an application be made to the legislature, for an alteration in any of the departments of the medical profession, which is an expected event, as the hostile feelings of the members are likely to influence public opinion, and thus produce results permanently injurious to our profession, it surely must be proper to submit to the medical public a narrative of the proceedings of the college, the correctness of which may be ascertained by any of its members.

The writer of the present article, though indifferent whether his name be known or not, does not wish to publish it on the present occasion*. If, then,

* We must, therefore, leave our readers to guess who the author is; we shall only say that he was one of the most eminent surgeons in London.—E. G.

Mr. Editor, for the sake of justice, and in expectation of doing good to the profession, you will insert my narrative and comments in your *Gazette*, you will much oblige

A PROFESSIONAL FRIEND.

It is not necessary to go back farther than the reception of the present charter, since it is the authority under which the censured acts of the college have taken place. When the college expended upwards of 30,000*l.* of its own money, in addition to the 27,500*l.* granted by parliament, to prepare for the reception and display of the Hunterian Museum, the downfall of the institution was solemnly and fearfully predicted by many of its elder members, who were men of intelligence. They, however, made their calculations on the *status quo*; they did not anticipate the great influx of persons into our profession, and the consequent influx of funds to the college. As soon as the finances of the college were retrieved, and it was deemed capable of supporting its necessary expenses, all contributions were taken off from its members, and the fee for its diploma was reduced.

In order to ascertain and promote the proper classical education of youths entering into the profession, the college offered advantages to those who were brought there to be articled, which afforded the Court of Examiners an opportunity of inquiring into their classical attainments. That such education should be continued as long as it could conveniently, the court refused to article youths as students till they were sixteen years of age, or to examine them as candidates for a diploma until they were twenty-two. Yet fault is found with this regulation. The surgeons of provincial hospitals say, that it offers equal facility of admission into our profession to those who serve the greater part of their apprenticeship in compounding medicines, as to others who are articled to hospital surgeons, and have passed their time in attending those institutions. Now before the late disturbances began, the college had agreed to admit four years' attendance on a provincial hospital by an articled student before the commencement of his regular anatomical and physiological studies, as equivalent to the half of the hospital attendance required from him when a candidate for a diploma.

Moreover, the hospital surgeons in a metropolis say, that their apprentices ought to be distinguished from others; that they attend anatomy and physiology, and have an extensive sphere of practical observation and information open to them from the very commencement of their articles; and, therefore, that a less time should be required from them to qualify themselves to take out their diploma. In either of these instances, it is manifest that interested motives influence the complainants, who do not seem to consider the difficulty of making regulations to suit variety of cases.

The strictness of the examination of candidates has also progressively increased with the improvements of science. The great number of candidates who have been referred by the court to a longer continuance of their studies, has induced students in general to look forward to their examination with considerable apprehension, and to prepare themselves for it by proportionate diligence. Persons who were members of other colleges have affirmed, that the examinations of the London college, though brief, were in their opinion a more effectual test of professional attainments, than those to which they had before submitted in other places.

It was formerly the practice of the Court of Examiners here, as it is in some other Colleges, to inquire into the professional attainments of candidates by committees of the examining members; but of late, each candidate has been examined separately, in the hearing of the whole court. Thus have the examiners voluntarily expended great additional time and attention, in order more perfectly to perform their important duty.

The Court of Examiners knew that many of the provincial hospitals of this country presented a larger field for the acquirement of practical knowledge than is to be met with in some of the metropolitan hospitals which it has recognized as schools of surgery; and often deliberated on the propriety of receiving certificates of attendance on such provincial hospitals, as testimonials of proper professional education. The court had hitherto been withheld from so doing, from knowing that, in order to profit by opportunities of acquiring practical information, a student must

previously possess a knowledge of the structure and functions of the various organs and parts of the body, of the nature of diseases, and of the principles upon which they ought to be treated. Yet, as soon as it was perceived, from the great influx of persons into our profession, that the recognized hospitals were likely to overflow with students, so as to impede the ready acquirement of practical knowledge, the court decided to admit certificates of attendance on provincial hospitals upon certain conditions.

The funds of the college have been at all times liberally expended in making great additions to its museum, and in keeping it in a state of unrivalled order and preservation. With respect to the library, it should be publicly known that the college, till of late years, did not possess one hundred volumes. The formation of a library for the use of the members, and to promote the scientific knowledge of our profession, was at the suggestion of the Directors of the College. The belief that the funds might be inadequate, induced Sir Charles Blicke, in 1816, to leave a legacy to the college, that the annual interest might be expended in the purchase of books. The same belief induced the Council at first to allot only small sums not exceeding 100*l.* per annum, to the gradual augmentation of the library; but it was proposed to vote a sufficient sum for its completion, so that it might be opened as a library of reference for the use of the members.

After a long series of well-intended conduct, the Directors of the college flattered themselves that they had deserved, and even obtained, some degree of public approbation, as a reward for a great and gratuitous devotion of time and labour in the service of the profession.

I proceed to relate the circumstances of that act of the college which gave rise to the late disturbances.

The Court of Examiners had always been accustomed to receive certificates of attendance on anatomical lectures, as credentials of the proper professional study of candidates, well knowing that such lectures included both physiology and pathology. It would have been in vain to have required students to attend separate lectures on physiology and on morbid structures; for such lectures have not been given separately in this

country. In consequence of the great increase of persons educated to our profession, many additional schools of anatomy were set up; in which students were by no means so amply instructed in the principles of professional knowledge, as in those which had been previously established. From the temporary necessity of instructing young men for the service of the army and navy, a summer course of anatomy was first given in this metropolis. Progressively, persons became teachers of anatomy, who had neither preparations nor drawings illustrative of the subject, and who merely taught common and coarse dissection, unassociated with either physiology or pathology. Certificates of attendance on anatomical lectures were presented to the Court of Examiners, signed by persons unknown to any of its members. Under these circumstances, it became necessary to impose some check on this increasing evil.

The Court of Examiners, anxious that students should attend teachers capable of giving them enlarged and scientific views of their profession, and not knowing how it could obtain from distant places any evidence of the teacher having himself received a liberal education, but by the means adopted; resolved not to receive certificates of attendance on anatomical lectures, but from persons appointed by an university, teaching in a school connected with, and accredited by, one of the recognized hospitals; or being himself a physician or surgeon to an hospital. Could better means of accomplishing the object been suggested, doubtless they would have been preferred. The supposition that the Court meant, by this regulation, to confine the teaching of anatomy to physicians and surgeons of hospitals, is absurd; for no person could give such anatomical lectures as it wished to be generally established, but those who have undergone a long and laborious education with this intention.

When the foregoing regulation was first made, the Court announced its intention of still admitting certificates from all those persons whom it had formerly recognized as anatomical teachers; and from unwillingness to act with injustice or harshness to any person who could urge a reasonable claim to become an anatomical teacher, it admitted others, and eleven anatomi-

cal schools were recognized in this metropolis. It is well known that the regular schools of anatomy have never been open, during the summer season, in this or in other countries. There are good reasons for believing that the summer courses of anatomy, and the great number of minor schools, have been injurious, by preventing the established schools from obtaining a supply of subjects adequate to the proper tuition of students.

The Court of Examiners was warned by its own members of the evil construction that might be put upon this regulation; and, therefore, urged to send to those whom it recognized as teachers a circular declaration of the seeming necessity for this restriction; and also a description of the lectures giving in London under the title of anatomical, expressing the hope that these acknowledged teachers would make their lectures as extensive as instructive, and that they would discountenance, as much as possible, the practice of teaching the common facts of anatomy without reference either to physiology or pathology. When the adversaries of the college first publicly charged it with being influenced in its conduct by sinister motives, a considerable number of the most respectable of the junior part of the profession addressed that institution, expressing their approbation of its constitution, and their conviction of the purity of its motives, yet accompanied by the wish that the regulations which had excited discontent should be revoked. They also urged the college to allow them to publish a declaration of their sentiments for more general signature, which, in their opinion, would soon shew that the malcontents were but a small, and probably a self-interested party. The college would not agree to any of these propositions: and it is not probable that men would be so indifferent about public opinion, or reject the friendly assistance offered them to regain general approbation, but from the consciousness of being undeserving of censure.

The Editor of the *Lancet*, and his coadjutors, had, however, for some time been inoculating the profession with suspicion and discord; nor did the virus fail to produce its expected effect among those susceptible of its operation; viz. those who thought they might derive advantage from an alteration in the con-

stitution or regulations of the college. The last act of the college was the assailable point, and its adversaries rushed forward to the attack with clamorous and furious hostility.

It would seem like mischief-making to repeat the accusations and calumnies that were brought against the college, which would be necessary in order to refute them, at the present juncture, when they are quickly fading even in the memories of those principally concerned in them. It would, moreover, be useless; for after all that could be said on the subject, persons will judge of others by themselves, and impute those motives to them which they are conscious would have influenced their own conduct in similar circumstances. Thus shame must become attached to those who think evil of others. Suffice it therefore to say, that the college revoked those regulations which were found to have produced dissatisfaction.

[To be continued.]

REMUNERATION OF THE COURT OF EXAMINERS.

To the Editor of the London Medical Gazette.

SIR,

You would oblige me if you could inform me, through the medium of your valuable publication, whether the 22l. 10s. which is paid on becoming a Member of the Royal College of Surgeons in London, goes into the private pockets of the Examiners themselves or not?

I am, Sir,

Your most obedient servant,

MEDICUS.

London, 20th Nov. 1829.

[The above letter was mislaid, otherwise it should have been inserted sooner. We applied for the required information, and the following is the answer—the accuracy of which may be relied on.]

“Twenty-two pounds, the price or fee upon a diploma (not 22l. 10s.), are carried to the account of the College funds, and do not go into the private pockets of the Examiners themselves; and it is only from this source that the funds of the College are derived, it having no landed endowment.”

107.—v.

PROTRACTED GESTATION.

THE discussion at the Westminster Medical Society, which we reported in our last number, was resumed on Saturday last, as follows:—

MR. JEWEL.—I rise for the purpose of relating two or three cases, which have occurred under my own observation. The first case I have already related to the Society, during some part of the last session: it was one, I imagined, of extra-uterine foetation. The woman was the wife of a mechanic, who took a situation in the country, and was separated from her husband. She obtained permission to come to town, and passed the night with her husband; the 8th of November. All the various sympathetic affections of pregnancy made their appearance, and at last she gave up her situation and came to town. A midwife was engaged to attend her. She had all the premonitory symptoms of labour, and even sharp pains, but these subsided, and no further parturient action took place. It was remarked by Dr. Locock, that in these cases of extra-uterine conception labour comes on at nine months, and in this case it took place on the 273d day.

The other case bears more on the question. It was one of a woman whose husband was a labouring man, and was obliged to go 40 miles from town. He was a well-digger. This woman remained in London, and some good-natured friend suggested that her husband might have got another wife. She went to him immediately. When she arrived, her husband received an order to go 20 miles further on, to some other work. She staid there only one night with him. This was on the 15th of March, and she fixed the 15th of December for her delivery. I was anxious to ascertain whether labour would come on at that time. The labour took place, not on the day she fixed, but the following day, the 16th of December. Now these are facts from which we might, perhaps, draw some inference, that the period of gestation is nine calendar months. Reasoning from analogy, we find that nature sometimes deviates; but, I believe, if we take into consideration these facts,

we shall find that she does not deviate in any great degree.

There is one circumstance which I wish to notice. I think we should receive with great caution the accounts of authors and writers on this question, because some of them may be misled by the reports they receive from women themselves, which can seldom be relied on. For instance, Capuron, a man of great talent and observation, states, that a woman was delivered of a living child at 4½ months, and that the child was reared. Now, he must have relied on the statements made by the woman. And there is a case alluded to by Dr. Paris, where a woman was delivered at the 16th month. If we rely on the statements we usually receive from women, we shall generally be led into error.

MR. CHINNOCK.—From being officially connected with an institution, I was applied to to give evidence on the Gardiner peerage case, relative to a supposed instance of protracted gestation, which occurred in my practice. Some legal objection was made to the case, and as the particulars have not yet appeared, I shall state them.

A young woman applied to me in the month of October to attend her in her confinement, stating that it would take place in January following. Finding no symptom of labour at the time she expected, I questioned her as to the mode of her reckoning, and her answer was, that she had not had connexion since the 29th October preceding, when her husband went to join his ship. She had menstruated 14 days before. On the 20th day of February she was delivered. Thus making a space of 298 days from the supposed time of conception, 18 days after the usual time. It is right that I should observe, that labour came on three days previous to delivery. Perhaps, it may be argued, that this is not a case of 298 days' pregnancy, but of 295, from the uterus shewing a disposition to get rid of its contents three days before. I have counted from the hour her husband left her, and it is not certain that conception may not have taken place any day previous.

Now I submit this as a clear case of protracted gestation. But it was not admitted by the Solicitor-General, in consequence of my drawing the conclusion from the statements of the patient,

and not from actual observation. If the statements of a virtuous woman are not to be relied upon, I would ask, what is to guide a medical man—how is he to judge—how is the question to be settled?—unless we were to establish an experimental hospital, as proposed in a jeu d'esprit, by Dr. Lyall.

Let us compare the medical testimony. On one side, we have the names of Clarke, Gooch, Davis, Blegborough, and Pennington. I grant you they gave evidence in the negative; but the cases they bring forward tend only to prove what has been admitted on all hands—that the *usual* term is nine calendar months; but they do not disprove the probability of gestation being protracted.

On the other side we have Merriman, Granville, Conquest, Blundell, Hopkins, and others, who bear their personal testimony in opposition to these; and they bring decided proofs as to the possibility of nature varying in her time;—and I do conceive that one well-authenticated case is better calculated to bear on the subject than one hundred that are theoretical.

DR. LEY said, the possibility of protracted gestation cannot be denied. The question is, as to the frequency of the protraction, and the utmost extent to which it has gone. It is a question of experience, and can be determined only by an examination of the facts. But before we enter on this subject, we must first determine the *average* period. As far as I have seen, the assumption has been universal, that the period is 280 days, or nine calendar months. I believe nine calendar months approach nearer the truth than 280 days. I would first take the authority of the church: Christmas and Lady-day falling on the 25th December and 25th March. I might also quote regal authority on this subject—if it were proper—for it is well known that an illustrious personage was born exactly nine calendar months after the royal parties met, and they cohabited only once.

I am inclined to think that gestation can be protracted, and the only point of importance is to determine the extent of that protraction. This is the most important point of all connected with legal investigation; because no one would assert that a child, born nine calendar months and four days after the death of the reputed father, would not

be allowed to inherit, supposing him to have died suddenly, and in the full vigour of life. But when the question comes to fourteen days, three weeks, or a month, it assumes a different shape. Then it can only be determined by a reference to facts. But there are great difficulties attending this subject, because we do not know at what intermediate period between menstruations conception has taken place. Some women have gone beyond the nine calendar months; and because they have gone three weeks beyond the average period, they must have proved with child immediately before the last menstruation. I recollect an instance in which a woman went more than eleven lunar months; but surely this is capable of another explanation, and if it is explicable on other principles more consistent with the phenomena of nature, we must adopt that. But that protracted gestation does take place, I have no doubt. A patient, whom I had attended more than once, and who had never been mistaken above two or three days, begged me to attend her. She passed the utmost period that could be allowed; she passed *eleven* periods. I was disposed to ascribe this to an accident, but I found certain circumstances which struck me forcibly; it was, that the maturity of the child seemed to be delayed by a peculiarity of structure. The labour had advanced considerably when I was called. I first thought it was a dead child, because I found the bones riding one over another. But, however, a child, far behind the usual development, was expelled; it cried like a premature child. After the birth, pains came on, but the placenta was not expelled; and I then passed my hand, and found an after-birth, not larger than three inches in diameter, terminating in a line two-thirds of an inch in thickness. There was morbid adhesion of the placenta. This case was to my mind one of the strongest proofs of protracted gestation. We had not only the fact, but the explanation of the phenomenon. The extent to which labour can be protracted is not yet settled; no case has yet occurred to me where I could say the labour was protracted beyond fourteen days. The strongest argument after all is that drawn from the analogy of the lower animals. It is not yet settled in the human species; and it is not likely,

from the nature of the evidence, that it will soon be so.

DR. RYAN.—I take the liberty of making a few observations on the important subject before us. The weight of medical authority in this, and in every other country, goes with Dr. Granville, whether we look to ancient medicine or the present state of medical science. There are cases which have not been alluded to. There is one by Dr. Collins, of Liverpool, in the *Edinburgh Journal* for 1826, in which it appears the woman went eleven months. It happened subsequent to the Gardiner Peerage cause. Dr. C. had no theory on the subject; he merely stated facts. There is another case, published by M. Velpeau, where the woman went 310 days.

I have met with a case of this description subsequent to the Gardiner Peerage cause, and which I have placed on record. I was requested to attend a patient, 21 years of age, who married in January 1826. She had menstruated previously with great regularity, and she menstruated the last week of February 1826. She quickened in July, and she expected to be delivered in November, about the ninth calendar month. She was not delivered in November, nor in December, nor in January, and she went to the middle of February. Now this case may be disputed by some gentlemen, but the delay alarmed her friends so much that they expected she would have died undelivered. She had no object in giving an untrue account of herself. Hippocrates, and all the older writers, relate cases where pregnancy was protracted for many months beyond the usual period of gestation; and practitioners must every day meet with cases where women must mistake very much, or have protracted gestation. Dr. Ryan added, in answer to a question from the chairman, that his patient reckoned from the last menstruation, and she had always before menstruated regularly.

DR. GRANVILLE'S reply.—Sir: the experience of the first evening, when I introduced this question to the attention of the Society, and that of this evening's debate, convince me of the propriety of the line I adopted in reserving all I had to say in reply, either to questions or observations addressed to me by the various speakers, until the conclusion of the discussion, rather than interrupt it by interlocutory dialogue, which,

without promoting the investigation of truth, debars gentlemen well skilled in the subject-matter from delivering their sentiments at length; while it tires and exhausts the patience of the hearers. I will be bold to say that by following such a line of conduct in our discussions, we shall, at all times, elicit more information than where gentlemen offer themselves to the attention of the Society with controversial remarks more than once, except in explanation.

That we have derived as much benefit as we could desire on the present occasion, from this mode of conducting the discussion, is a fact fully established by the several speeches from distinguished members, which followed each other in succession on both evenings. The Society is much indebted to those gentlemen, for their exertions in throwing light on a question of the utmost importance; but more than any other am I indebted to them for the earnestness and zeal with which they have assisted me in developing its merits, smoothing its difficulties, and establishing its truth.

Although I may say that with regard to the principle itself all the gentlemen who followed me seemed to be in accordance, there are differences of degree, trifling indeed, but still differences between us, of which I am probably expected to take notice, and observations to which I am ready to reply. I shall endeavour to do both as briefly as the nature of the subject will admit; and for this purpose, instead of following each of the speakers methodically, I shall confine myself to those among their remarks which bear being grouped together, and answered collectively.

Here I must again crave the indulgence of the Society, if, contrary to my usual practice, I refer to my notes for the principal part of my argument. The reason of this is obvious. In the trial to which such frequent allusions have been made, and with the whole tenor of which the Society must by this time be well acquainted, it will be recollected that I was put foremost in the battle among those who with me supported the doctrine of protracted gestation; not that my character, age, or experience, pointed me out for that situation, but because I alone brought forward registered and well-digested facts—not facts resting on memory, but facts recorded as they occurred during

a long succession of years, when there could have been no purpose to serve but that of promoting scientific investigation. Such being the case, it is manifest that I need be on my guard in what manner I controvert whatever has been opposed to me in the way of observation or argument in this inquiry, not on this occasion—for I am happy to find we are all agreed—but on the occasion of the trial in question, not only by the medical witnesses on the other side, but by the learned gentlemen who summed up their evidence and commented upon our own. I must be cautious and circumspect in my expressions, lest, as I see sundry pens at work ready to waft to the public all that I have to say on this subject, I should unwittingly expose myself to some unwelcome *ex officio* information, for which I am neither prepared in purse nor person.

In the first place, then, I would notice the remark which fell from Dr. F. Ramsbotham, who stated that nothing which I had advanced the previous evening proved satisfactorily that *human* gestation could be prolonged to any extent. There is evidently a misapprehension on the part of the learned Dr. in this place, for I never said that gestation could be prolonged to *any* extent, but I contended that protracted gestation, as an occasional exception to a law of nature, was possible, and brought forward cases to prove it, to a limited extent of six weeks at most, but oftener only of three, four, or five weeks. There must be a limit even to the range of exception. For instance, what would my learned friend say of me, were I to deny the possibility of a human monster with two heads having existed—as an exception to the general laws of formative nature, or of two Siamese youths being linked together by a fleshy band, only because my learned friend could not prove also that there ever existed a lady with a pig's face?

Again, Dr. Ramsbotham, being anxious to develop an ingenious supposition of his own, respecting a prolonged intro-tubal existence of the foetus, seems to insinuate that *protracted gestation*, in my opinion, is referable to *utero-gestation* only, and to that opinion he objects. I have purposely abstained from even using the word *utero-gestation*, because as I am totally ignorant of the real causes which may protract gestation, so am I at a loss to state in what

part of the uterine system gestation is retarded. But I will forgive my friend these little misapprehensions on his part of what I have said, for the sake of his ultimate admission, that protracted gestation is possible from analogy derived from comparative anatomy, and still more from his notion that the foetus may on some occasions be supposed not to begin his nine months' career till he has spent some days on his road from the ovarium to the womb. The question between us is one of manner, not of reality. It imports me not to know whether an idle boy, who has reached home some hours too late, did so in consequence of loitering when he first started from school, or only when he was nearer to his home, if the fact of his idling by the way be admitted.

Some gentlemen asked whether I could explain the reasons, or in other words, account for protracted gestation—and another member put the question, whether any correct information had yet been obtained respecting the immediate cause of parturition.

Now I would reply to the former query by a negative to the latter. It is because, as I observed on the former evening, "we are not acquainted with the marvellous action that comes on at a particular time to expel the child," that we can neither fix a time for the more natural period of parturition, nor deny the possibility of that period being protracted.

Doctor Locock, who after some very sensible remarks on this question, concluded with assenting to my proposition, that the period at which parturition naturally occurs, will occasionally be put off;—asserted, that the result of extra-uterine foetation proves that nature has a fixed rule in human gestation. Now, although I admit myself the existence of a fixed rule, and only contend for an exception, I do not agree with him in the proposition, that because the extra-uterine foetus is said to die at the nine months' end, and cannot go on increasing, the limitation to gestation is therefore established. I would ask in answer to that, is there nothing else to account for the death of the foetus? May not the unnatural situation he is placed in sufficiently account for his destruction? But to this argument of mine I attach no importance; I am satisfied with the impression en-

tertained by the learned physician of the possibility of protracted gestation.

Among those who spoke this evening I would beg leave to confine myself to the arguments of Dr. Ley, not from want of due regard to what fell from other gentlemen, but from a desire to save the time, and be sparing of the forbearance of the members present. Dr. Ley is surprised that I should have discussed in preference, and limited myself to, the question of the possibility of protracted gestation. The extent, says the learned Doctor, of protracted gestation, is what imports us most to know. Truly it is so, but in my case I had first to prove that protracted gestation was possible, as the occurrence of such a phenomenon was declared by the physicians and learned gentlemen on the other side to be impossible. What said the Solicitor General on that occasion? "we have examined the most eminent practitioners in this country; their lives have been devoted to the study of the history of the human foetus (!!) They say the period is invariably uniform; they believe an extension of the period to be *physically impossible*." Surely, sir, after hearing this, my friend Dr. Ley will no longer doubt of the necessity of my first applying myself to demonstrate the *possibility* of that which was contended to be impossible. The question of extent to which protracted gestation may reach is doubtless of the utmost importance, but far other arguments and inferences would be required to settle that question. In all his other statements I cannot but agree with Dr. Ley, and I thank him for his valuable authority, in addition to the overwhelming one already collected before the Society.

Another part of my duty in summing up this discussion is to refer to the cases brought forward as new instances of protracted gestation, in corroboration of my proposition, both on a former and on the present evening. And while I thank those gentlemen who have done so, and particularly Mr. Chinnoek, Dr. Ryan, and Mr. North, the latter of whom I was happy to find fighting skilfully by my side, and parrying one or two slight blows aimed at me on a former evening; I cannot but impress on the attention of the society the fact, that when we come to consider a question of such

importance as this among really practical men, we find nothing but affirmatives and cases in illustration.

But then, sir, these cases will be disputed, either in the way that Dr. Merri-man very properly noticed, (and in noticing, duly castigated), namely, by forthwith suspecting the honesty of the female party; or, as I have myself before remarked, by doubting the judgment and ability of the medical persons who narrated the cases.

It is indeed a curious, and at the same time preposterous assumption on the part of those who are opposed to us, that no woman, it matters not of what character or degree, (particularly if married) and who has been quoted as a case to illustrate protracted gestation, has been admitted to be either correct in her notion of her own state of health, or honest in conduct. In fact, these gentlemen have contended that all married women who have gone more than nine months with child are worthless of credit; and that "unmarried women, who have applied for the assistance of the most eminent practitioners immediately after the indulgence of their passion, (such are the words of the Solicitor General), are alone worthy of confidence."

With regard to the very cavalier manner of handling the medical authorities who supported the possibility of protracted gestation by facts, registered, mind me, at the moment of their occurrence, and not recollected only at the moment of examination for a particular purpose—registered during many successive years—when there could be no purpose to serve; I have only to instance the way in which I had the honor of being treated by the gentlemen in flowing robes. It is curious that I have never been able to obtain, until some months after the publication of M. Le Marchant, which I hold in my hand, and which was lent me last month only, an account of the summing up of my evidence by the Attorney-General in the Gardiner peerage; that publication appeared so late as four years after the trial, or the men of law would, in all probability, have heard from me somewhat sooner.

I am aware that it is a well known trick in a counsel for either party to throw out insinuations against the witnesses of the opposite party; and therefore the society will not be surprised

when I read out of this book how Mr. Attorney-General began his comments on my evidence.

"The first witness," said the learned gentleman, "called to prove exception to the general rule, is Dr. Granville. I shall say nothing to his disadvantage." Delightful forbearance this in a lawyer, who knew that the whole life of that witness—his conduct while in the enjoyment of a good share of public consideration—and the testimony of some of the lords he was then addressing, would instantly have gainsaid the law-officer, had he ventured to follow a different course. Thank God! a physician's character and fair reputation in this town are not to be extinguished by a forensic or oratorical reticence, or by a figure of speech.

In supporting the possibility of protracted gestation before the lords, I acted conscientiously, and according to the conviction of my mind, brought about by the occurrence of facts collected with more industry than my opponents have been able to shew in the course of several years experience. And it is not less to the purpose to say, that in coming forward on that occasion I neither stipulated for a specific remuneration, which our opponents received, but which we have never; nor did I consult my interest when, in giving my evidence, I ran counter the family interest of several who had before been in the habit of consulting me professionally. For the forbearance, then, of the Attorney-General upon that occasion, I would offer in return the expression of my hearty wish that when nature shall have asserted her right, and the now exalted personage, after a long and illustrious career of honour and usefulness, shall be no more, there may be inscribed on his tomb, "Nothing shall be said to his disadvantage."

I will now, sir, grapple with one or two facts which have been disputed, because I shall be able to shew that if there be any endeavour to garble truth in cases of protracted gestation, it is on the part of those who dispute the facts, and not of those who relate them. On my part, and for our present purpose, I will select, if you please, the case of Mary Parker, brought forward by myself, and that of Mrs. Mitchell, brought forward by Dr. Hopkins; a case which my learned friend Dr. R. said was very

strong until it was explained by further examination.

Dr. Ramsbotham has repeated this evening what he had asserted before that the eminent practitioners who had been examined on the side opposed to us, had founded their opinion on many cases. I charge that learned gentleman who has no doubt read the evidence throughout and spelt it—I charge any other who may read it—nay, the eminent practitioners themselves, Dr. C. Clarke, Dr. Gooch, Dr. D. Davis, and, *inter alios*, Mr. Pennington, “whose lives, as Mr. Solicitor-General said, have been devoted to the study of the “history of the human foetus”—I say, I charge them to point out one only case brought forward by them in support of a doctrine so inevitably true and uniform in “thousands of patients who have been under their care,” in which a name, a date, a residence, or any other title to confidence and reliance have been mentioned? While we, who supported rare exceptions out of some thousands of cases too, exhibited these instances of exceptions, with every particular and minute circumstances of those exceptions noted in books by impartial observers, and even produced the parties themselves. One of those eminent practitioners, indeed, Dr. C. Clarke, *alluded* to numerous cases in which he could say safely that the period of 40 weeks had never been deviated from; but he merely alluded to them generally, and from memory, and could not undertake to say whether they were five, ten, or twenty. The unvarnished tale of Mrs. Parker is this:—

She is 41 years of age; applied at the Westminster General Dispensary on the 7th April, 1825, being in a state of pregnancy, when a proper midwife was appointed to attend her. By her account she had missed her menses upwards of eight months, and expected in one month to be confined—that is, in May. She was produced by me at the bar of the House of Lords, on the 4th of July, 1825, in a state of pregnancy still, having outran her reckoning by at least six weeks. She was examined at full length, in the strictest manner, and interrogated in every possible way that forensic ingenuity could devise. No witness ever gave a clearer account, or more pertinent answers. The Attorney-General (p. 316) admitted, that, after the cross-examination of this wit-

ness, and lopping off as much of her evidence as they could, she must have gone her full nine months at the time of her appearance at the bar; and this, says the Attorney-General, “shews the absurdity of relying upon such cases to assist calculation, and the necessity of examining into the cases stated by medical men.”

Well, what was in reality the result of this case of Parker, thus triumphantly concluded at the expiration of nine months by the Attorney-General himself, as if she had actually been at that moment delivered? Why, that she went nine days longer, and was actually not put to bed until the 13th instant; or in other words, several days after the said judges had declared that a woman could not go more than nine months. This appears, from the report of the midwife, perfectly authenticated. But perhaps, even here, our friends the lawyers will doubt the veracity of the patient, the midwife, and the physician, as it may suit their purpose.

Yet these gentlemen, who thus jump at conclusions which are shattered to atoms, and then wafted into nothingness by succeeding facts, venture to throw out this insinuation against us:—“It is the character of some men to adopt extraordinary conclusions, rather than to examine into the extraordinary appearances which afford them amusement and pleasure.”

So much for Mary Parker's case, which may now be fully recorded as a case of protracted gestation, on the authority of Sir J. Copley himself, when Attorney-General of England.

We will now analyse the case of Mrs. Mitchell. Dr. Ramsbotham, who followed me on this question upon a former evening, and who stated that such a case would have been sufficient to persuade him of the reality of protracted gestation, had it not been demolished by the evidence of other witnesses, will range himself on my side when I shall have shewn that the demolition of Mrs. Mitchell's case was like the demolition of those fiery castles with which the pyrotechnic exhibitions at Vauxhall generally terminate, to the delight of both lawyers and physicians, as well as babies and *id genus omne*; when, after many snappish rumbles and fuzzing noise, smoke and stench in abundance, and, lastly, a great explosion, the stout

frame or structure of the real castle remains behind unbattered, to serve for succeeding exhibitions.

My friend, Dr. F. Ramsbotham, gentlemen, it should be known, comes all the way from the East—from Broad-Street Buildings—for the sole purpose of assisting us in this investigation; and thither, all the way, must he return to-night. Now I should feel great satisfaction if I could induce him to become a more decided combatant on my side, by shewing him that the case which produced two such opposite effects on him, ought, in fact, to convince him of the truth of our doctrine.

The way in which facts have been strained, in Mrs. Mitchell's case, in order to make them come up to the bearing point, is worthy of notice. I, of course, acquit the gentlemen who handled her case so roughly of any sinister intention. Theirs was the pure desire of eliciting truth, no doubt; but the result has convinced me that it is somewhat dangerous to rely on conclusions squeezed out by special pleaders, from clear facts obscured by cross questions, or, as they might well be called, *cross purposes*.

Mrs. Mitchell deposes, that her husband, who was purser of the *Galatea*, was with her a fortnight, in the year 1798, and that the 6th of June was one of those days.

On this, the Attorney-General produces two registers from the Navy-Office; the one of which is called a ship muster-book, the other a book of the clerk of the cheques, to disprove her assertions.

The former register is generally signed by the purser, the other by the clerk of the cheques of the dock-yard. In the former, the name of Mitchell, purser, was read over, with all the rest of the crew, on the 7th, 14th, 22d, 31st May, and 1st, 14th, 21st, and 27th June. His own signature is to the book. Now the Attorney-General here jumps at the conclusion that Mr. Mitchell could not be with Mrs. Mitchell in York-Street, Westminster, and be at Plymouth at the same time too, according to the muster-book. But, lo! when the counsel on our side asks the clerk of the navy-office at the bar, whether Mr. Mitchell signed the said muster-book each time or day therein stated, hear what he says:—"The purser does

not sign to each muster, but he merely signs the book at the end."

"In your judgment, when does Mitchell's signature seem to have been affixed?"

"I see it is stated to be signed the 30th day of June."

So that, in reality, this very register, or ship's muster-book, proves nothing as to the presence of Mitchell on board the *Galatea* on the 6th June, or any day previous for some time; but just the reverse. Yet the Attorney-General, lacking his usual discrimination on that occasion, takes upon himself to say to the Peers—"Mrs. Mitchell pretends that her husband was with her the latter end of May, and the first week in June, in London; and eight times in each month has this man, Mitchell, actually signed, with his own hand writing, the muster-book;"—and this mind, sir, the Attorney-General says in despite of Mr. Lance, the witness from the navy-office, who deposes, on oath, that "the purser does not sign each muster, and in this case signed on the 30th of June only, once for all." (1)

The fact is, sir, that I can throw some light on this part of the evidence by the knowledge I must have of the practice in the king's ships, having been some years on board of them. The captain's muster in harbour, here alluded to, is little more than a farce, as far as the officers are concerned, and more so with regard to the purser, who is always supposed to go backwards and forwards for the victualling of the ship's crew, and has even a boat allowed to him, in large and well-regulated vessels, for that purpose; and when the said muster takes place, if he does not answer to his name, and no mark exists at the same time in the register, of his having an extended and official leave of absence of many weeks, he is never noted as absent. I have seen pursers and captains affix their names to the ship's books, once for all, at the end of one month and longer, very often.

The thing is, indeed, different with reference to the register of the clerk of the cheques, who goes on board to see that no more names of men or officers are borne on the book for victualling than there are persons actually on board. Now this register, and really official document, says that the clerk of the cheques was on board the *Galatea* May 26, 1st and 14th

1st and 14th of June, and so on: So that Mitchell on the shewing of this register might have been absent from the 2d to the 14th of June, which includes the 6th. On that day, therefore, it is *not proved* that Mitchell *could* not be with his wife; and that is the *terminus* of *conception* assigned by her, and we have no business with any thing else. Why not call some of the many who must yet survive—lieutenants, midshipmen, or others of the crew of the ship—to prove that Mitchell was *bonafide* on board on the 6th June? The clerk of the cheque's register itself does not prove it—far from it; and the first or ship's muster-book is good for nothing. But I will say more for the veracity of Mrs. Mitchell, whom I know not, and never saw even at the bar. Mr. Mitchell may have been absent from the ship even on the 1st of June, when the clerk of the cheque called over the ship's company, and yet his absence not have been noticed. The captain, it it appears, was himself absent on leave. If Mitchell was absent by sufferance from the first lieutenant, which has been often the case, no notice would be taken by the clerk of the cheques, who was probably told Mitchell was just then not on board; and thus we would have an interval of sixteen days clear, during which it cannot be disproved that Mitchell might have been with his wife, including the 6th of June, from which conception was dated; and thus is Mrs. Mitchell cleared of the foul aspersion of unchastity, and another case of protracted gestation added to our list.

But I have said enough, and more than enough, for my purpose, and for the instruction of at least the junior members of the Society, who may in their time and turn, perhaps, be called upon to give an opinion, for which they will be glad to have sufficient authority to guide them. To the senior members, and my equals in standing in the profession, I have only to express a hope that they will not hold me to be pedantic because I strove to be dogmatic, when facts arrange themselves on my side, and are multiplied by the observations of those gentlemen who so readily entered into the debate. Neither will the earnestness of manner into which I have this evening been betrayed, by the nature of my argument, be found out of place. To some, the discussion may, perchance, appear to have been unnecessary, on a ques-

tion so clear, and as regards principle undisputed by any gentleman present; but I have to plead to this the excuse of an ancient writer:—“*Tametsi hanc materiam esse arbitror perspicuam; tamen de illa dixi, quod apud vos plurimum debet valere.*”

[Dr. Granville sat down amidst the expressions of general approbation, and the meeting did not break up till considerably after the usual time. The discussions have altogether excited a very high degree of interest.]

MEDICAL GAZETTE.

Saturday, Dec. 19, 1829.

“*Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum alt, dicendi periculum non recuso.*”—CICERO.

MR. EARLE AND THE LANCET.

IF it can afford Mr. Earle any satisfaction to know that his letter to the Editor of the *Lancet* has proved “gall and wormwood” to that worthy, such satisfaction must be his. It is an old remark, and a true one, that cunning people often over-reach themselves; and Wakley's manœuvring on this occasion forms a very good illustration of the adage. But for his elaborate efforts to refute the charges of Mr. Earle, and but for the statements of his own reporter, as contained in a letter which now lies before us, we should never have known the extent of his sufferings; sufferings from which not even his persevering exertions in the “hue and cry” against Mr. Phillips, of Finchley, have altogether been able to divert his mind—unprecedented as such exertions are in the annals of medical literature.

Wakley knowing that there was no chance of his being believed by any one unless the truth of what he said was vouched for by others, immediately on the receipt of Mr. Earle's letter, applied to the parties whose names had been mentioned, to see how far he could get from them any thing that would bear out his assertions. This was exactly as we had anticipated, and actually foretold, three weeks ago, (*Gazette*, Nov. 21). How far he succeeded in this, we have

already partly shewn. Dr. Armstrong recollected nothing, a circumstance too well explained by his illness; Mr. Weekes would write nothing, though urged by Wakley to do so; and what Mr. Fay did indite was nothing to the purpose, for he admitted that he had made communications to Mr. Earle of the nature described by that gentleman, only with this reservation that he had not been authorised to do so. One evidence still remained to be adduced, that of his reporter; an authority, it is true, of doubtful value, as coming from one in the pay of the party to be defended. This individual, with generous and *disinterested* zeal, stepped forward in his patron's cause, prompted, as Wakley himself informs us, "solely by his own honorable feelings." Mr. M'Christie's letter was received within little more than forty-eight hours after the publication of Mr. Earle's, Wakley having "neither seen nor heard from him, nor held the slightest communication with him, directly or indirectly, upon the subject." So Mr. Thomas Wakley received a letter from Mr. Earle, on Monday, Nov. 16, in which he described various applications and asseverations as having been made to him by Mr. M'Christie, the reporter to the Lancet, deeply involving the character of the Editor; and he, the said Editor, held no communication, "directly or indirectly, on the subject," with his reporter, until the Sunday following, when Mr. M'Christie, prompted *solely* "by his own honorable feelings," wrote to Wakley on the subject. Thus very nearly a week passed between the receipt of Mr. Earle's letter and that of Mr. M'Christie, without the party to whom they were addressed taking any step to ascertain what had really passed between these gentlemen, even without his evincing any curiosity to know what the latter had to say in explanation of Mr. Earle's positive assertions: such is the boundless confidence of kindred souls, *that fully understand each other*. Why however a letter so much to the point, and which was received "within little more than forty-eight hours" after the publication of that which it was intended, not merely to answer, but to annihilate, should have been so long kept back, or what the object of the Editor may be, in so earnestly requesting us to believe that he had nothing to do with it,

"directly or indirectly," we must leave for our readers to conjecture.

Whether its delay was owing to the extraordinary increase in the number and value of other communications, or whether the original version was not quite agreeable to the reader, or any alterations were suggested not quite palatable to the writer, we cannot pretend to say, but certain it is that three numbers of the Lancet were allowed to intervene between the receipt of Mr. Earle's letter and the publication of the only *shadow* of contradiction it has yet received.

We call it a "shadow" of contradiction; and we now undertake to prove, not only that Mr. M'Christie's reclamation does not gainsay the statements of Mr. Earle, but that it affords the strongest confirmation of their truth.

The letter may be divided into two parts or sets of propositions; the first consisting of retaliative accusations against Mr. Earle; the second, of statements inadvertently, but unequivocally, constituting most damning charges against the Lancet;—charges which, as they are published by the Editor himself, without any qualification or dissent, we have a right to presume are absolutely true.

On the perusal of Mr. M'Christie's letter, we saw at once that it was "got up" for the occasion—an artful admixture of truth and falsehood; but as we could not, on our own authority, contradict statements said to have been made by Mr. Earle, we forwarded the paper to that gentleman, with a request that, if there were any misrepresentations in it, he would point them out. Sanctioned by Mr. Earle's written authority, we have to state—

That the assertion made by Mr. M'Christie, that Mr. Earle, having stated that he did not attend the meeting held by certain gentlemen at the Freemasons' Tavern, nor contribute towards any fund for preventing the publication of lectures in the Lancet, added, "that he was ready to make an *affidavit* of these facts, at any moment you (*i. e.* Wakley) might require,"—IS FALSE.

That the assertion of Mr. M'Christie, that Mr. Earle said "there had been rather a hostile feeling existing between himself and Mr. Abernethy, and that he would not have consented to be present on such an occasion,"—IS FALSE.

That the assertion of Mr. M'Christie, that the above, or any thing to the same meaning, "was conveyed to Bedford-Square, as requested by Mr. Earle,"—IS FALSE.

That the assertion of Mr. M'Christie, that Mr. Earle admitted him, "knowingly on his part and avowedly on mine, as your own reporter, to the hospital practice,"—IS FALSE.

That the assertion of Mr. M'Christie—"I most explicitly stated to him (Mr. Earle) that I had called on him of my own accord, and altogether without your (Wakley's) knowledge,"—IS FALSE.

That the assertion of Mr. M'Christie, that Mr. Earle said "he had pledged himself never to become a contributor to the Lancet,"—IS FALSE.

That the assertion of Mr. M'Christie, that Mr. Earle said he was under the necessity of declining to give his notes, because "he was sure an improper use would be made of his compliance in other quarters, if it were to get known,"—IS FALSE.

That the assertion of Mr. M'Christie, that he did not assign as a reason for wishing to be allowed to report Mr. Earle's Lectures, that they "were highly appreciated,"—IS FALSE.

That the assertion of Mr. M'Christie, that, on his saying, "Well, I am sorry for this," Mr. Earle answered, "So am I, but I could not do otherwise; and you may tell Mr. Wakley that he ought to feel for my situation,"—IS FALSE.

These are the chief circumstances in which the letter of Mr. M'Christie contains statements at variance with those of Mr. Earle; but there are others of minor importance, which we omit, as not bearing particularly upon the points at issue.

Now, setting aside the direct and positive contradiction thus given by Mr. Earle to the statements made by Wakley's hired reporter, we ask, is it probable that Mr. Earle, who was one of the first openly to denounce the falsehood and malice of the Lancet (see his Letter, Med. Gazette, Dec. 13, 1827), should so far have humbled himself as to offer "to make an affidavit," at any moment he might be required, to gain the favour of one to whom he had publicly given the lie? Is it probable that he would assign as the motive of any part of his conduct the existence of a

"hostile feeling" between Mr. Abernethy and himself; and thus make Mr. M'Christie his confidant on so delicate a point at the very time he knew him to be in the pay of his bitterest enemy? And, *a fortiori*, is it probable that he would have requested him to communicate to his employer offers and statements which, if true, must have made Mr. Earle the meanest and most contemptible of mortals? Is it probable that Mr. Earle would have said, that he had pledged himself never to become a contributor to the Lancet, and have addressed a letter to the Editor of that publication within a week? Is it probable that Mr. Earle would publicly denounce the Lancet in his class-room—then send a whining message to Wakley, that he could not help it, and that "as a man, he ought to feel for him;" and immediately follow this up by publishing a letter so uncompromising and decided as the one alluded to, and which was certain to bring down upon his head his wrath he is represented as so anxious to deprecate? Mr. Earle's own account is, that he said, "Tell Wakley that he ought to feel that in consequence of his former abuse and injurious misrepresentations, the marked difference in his tone since I have been fairly reported, compelled me to take this step—tell him my character was suffering from his praise." Such are the two versions of the story, and we must leave our readers to believe which they think the more probable.

The credit to be attached to some parts of Mr. M'Christie's letter, must depend on the comparative degree of weight which may be thought due to his assertions and those of Mr. Earle respectively, as some of them, such as the above monstrous improbabilities, refer to what passed when no one else was present. Other parts, however, are refuted by evidence which the writer of the letter will scarcely be disposed to call in question—that of Mr. M'Christie himself, as given on a former occasion. For example, when he speaks of Mr. Earle "admitting him to the hospital practice," knowing him to be reporter to the Lancet, he forgets that he was not "admitted" by Mr. Earle until he had made a statement just the reverse of that now adduced. Mr. Vincent and Mr. Earle having some suspicions on the subject, had determined to ascertain whether he had sent reports of the

hospital cases or not, when (Monday the 14th of April, 1828) Mr. M'Christie called on Mr. Earle, and this gentleman, in a letter published at the time (*Gazette*, April 19, 1828,) gives the following account of what passed—an account, be it remembered, which, till now, has remained uncontradicted:—
 “I was, however, spared the unpleasant necessity of calling for such an explanation by the gentleman waiting upon me this morning, and, unsolicited, making a solemn declaration that he had never, in the whole course of his life, written a single hospital report. In reply to my inquiries respecting his being *bona fide* a medical student, *he distinctly avowed that he had always intended to follow the medical profession, and had entered himself as a pupil PURELY for the purpose of prosecuting his studies.*”

Again, Mr. M'Christie denies that when he called upon Mr. Earle to request his notes, he said the lectures were highly appreciated; but he admits that he said, “they were liked by the students;” so that this, which is put forth as a contradiction to Mr. Earle, after all amounts only to a slight difference as to the degree of estimation in which the lectures were held. Mr. M'Christie is also scandalized that Mr. Earle should use the word “enmity” in describing the sentiments expressed of him by Wakley, which he protests never fell from his (Mr. M'Christie's) lips, yet he had half a dozen lines before acknowledged himself the bearer of a message from Wakley to Mr. Earle, in which the *worthy* Editor expressed his regret for the “hostile feelings” he had entertained towards him. Thus, according to this very scrupulous gentleman, Mr. Earle's lectures were “liked,” but not “appreciated,” and Mr. Wakley entertained “hostile feeling,” but not a jot of “enmity:”—despicable quibbling!

Mr. M'Christie says, he told Mr. Earle that he came without Wakley's knowledge; Mr. Earle positively denies this, and states, on the contrary, that the circumstances were such as warranted him in concluding that Wakley did know; because, as appears by Mr. M'Christie's own showing, he had before been employed by Wakley to communicate a message to Mr. Earle; and it is a curious circumstance that on this occasion, although the reporter asserts that his visit to Mr. Earle was without his employer's knowledge,

he thought it necessary immediately to communicate to him the failure of an application made without his concurrence. “You will remember (says Mr. M'Christie in his letter to Wakley) that I called on you on the same afternoon *after* I had been with Mr. Earle.” But we are now insensibly passing from the charges against Mr. Earle to the indirect admissions of Mr. M'Christie, of a nature most unfavourable to the honesty of his employer; and to these we now direct attention.

When Mr. M'Christie became reporter to the *Lancet*, he says, “I called on Mr. Earle, aware of his having complained of the manner in which he had previously been reported to state that *I* (I in *Italic*) had had nothing whatever to do with those reports.” From this we learn, that statements had been published in the *Lancet*, concerning Mr. Earle, which Mr. M'Christie thought so discreditable that he felt it due to his character to disclaim having had any connexion whatever with them. Next, we have the motive which led to the publication of the said reports. “Further,” continues Mr. M'Christie, “that you (*i. e.* Wakley) considered Mr. Earle's avowed hostility against the *Lancet*—his attendance at the meeting at the Freemasons' Tavern, on the occasion on which Mr. Abernethy was in the chair, and his treatment of his patients in the hospital, as public conduct, and fair subjects for criticism.” Thus, then, did Wakley himself, in explaining to his reporter the workings of his mind, represent Mr. Earle's opinion of the *Lancet*, and his supposed attendance at a certain meeting as connected with the reports of his hospital cases!!! Farther—Wakley being informed that Mr. Earle had not attended such meeting, his reporter was instructed to express to him the Editor's regret for the hostile feeling “entertained against him in consequence,” with the addition, that if he would point out cases the publication of which “he thought would be conducive to his reputation,” they should appear. It is a remarkable fact that Mr. Earle, who is now represented as having made such despicable efforts to gain the favour of the *Lancet*, is stated with singular inconsistency to have spurned this conciliatory offer, for (says Mr. M'Christie) “he repeated his assurances that he only wished to be impartially dealt with.”

No art can stand against the simple

truth, and we pity alike the head and heart of the man who can read the monstrous absurdities which Mr. M'Christie's letter contains, without feeling to what disadvantage they appear when contrasted with the plain, straight-forward, and consistent narrative of Mr. Earle. Mr. M'Christie complains of Mr. Earle not having related *all* that passed: "he must have felt," says M'Christie, "that it would have been unpleasant for him to have stated the whole." That Mr. Earle has described all which ever passed between them, having the slightest relation to the points in question, he positively affirms; and we believe him. But we beg to ask, has Mr. M'Christie no recollection of ever having made any communication with regard to persons connected with the *Lancet*, which "it would have been unpleasant for him" to have had stated?

We trust it is the last time we shall have to wade through the trickery and falsehood with which the Editor of the *Lancet* has attempted to deceive his readers, with regard to this as well as every other question where concealment is necessary for his purpose. We, therefore, crave indulgence for a few words more, in reference to points in which the employer and *employé* are at issue. The Editor of the *Lancet* says, (No. for Nov. 14th, 1829,) "It is not true that we have urged, either directly or indirectly, that we are sensible of having injured Mr. Earle unjustly." If this be so, how is it that he sent the following message to Mr. Earle through the mouth of his reporter?—a fact which does not rest upon Mr. Earle's authority, but upon that of Mr. M'Christie, and which is admitted in this same letter, the accuracy of which is tacitly acknowledged by Wakley himself, who publishes it as a correct representation of what passed between them. Mr. M'Christie states, that when he told Wakley that Mr. Earle had not been at the meeting alluded to, he was instructed to say to Mr. Earle, "that you (*i. e.* Wakley) had certainly been labouring under a mistake on that point, and therefore felt sorry for any hostile feeling you might have entertained against him in consequence!"

Again, says Wakley, "It is not true that we have either directly or indirectly expressed a desire of making him some reparation." — (*Lancet*, Nov. 14th.)

Compare this with another passage contained in Mr. M'Christie's letter to Wakley:—"You farther said, that as I was about to take upon myself the duty of reporting, if Mr. Earle would point out to me one case or one hundred cases deserving of publicity, or the treatment of which he thought would be conducive to his reputation, you would publish reports of them." Thus did this *respectable* Editor, who never "directly or indirectly" said that he had injured Mr. Earle, and who never "directly or indirectly" expressed a desire to make him reparation, send his own reporter to say that he was "sorry" for the "hostile feeling" which he had entertained towards him, and to offer to publish such cases as he "would point out," as likely to be "conducive to his reputation;" in other words, to make an apology for the past, and to promise amendment in future.

It may, perhaps, be remembered, that when Mr. Earle stated, that though the reports were sometimes correct, the comments made upon them were false and malicious, Wakley tried to father these last upon a second reporter: a paltry subterfuge, which we at once detected, and, in consequence, declared the reporter to be "a nonentity." Well, then, in the letter before us there is a passage which throws some light on this point. Mr. M'Christie, in reference to the identical comments, the authorship of which had thus been denied by Wakley, writes thus:—"You gave me liberty to apprise him (*i. e.* Mr. Earle) that *your* observations had undoubtedly been made on the reports!" It is inconceivable that Wakley should have been so blind as not to see the mischief which this letter, giving the lie in this direct and repeated manner, must inevitably do to the character of his publication—if, indeed, it has yet any character to lose.

As to Mr. M'Christie, we can assure him that his conduct, if it be not "liked," will at least be "appreciated;" and we advise him forthwith to retire into the obscurity from which he has on this occasion, so unhappily for himself, emerged; or, if called upon to explain the circumstances which induced him so artfully to misrepresent the character of one to whom *we know* that at no distant period he voluntarily laid himself under personal

obligation, we recommend him to urge, like the apothecary who sold poison to his employer—

“ My poverty, and not my will consented.”

Nor would we have him disturb his peace by too much sympathy for Mr. Earle; for though he tells us that Wakley was “in a tremendous rage,” and that the circumstances “would call forth observations, such as he had hoped would never again have been seen, on his (Mr. Earle’s) conduct,” still it is just possible that the “rage” of his patron may not be quite so “tremendous” to others as it obviously is to him. As to the anticipated abuse of Mr. Earle, we have no doubt he is right; and only hope the worthy churchwarden will not be restrained by any of his usual delicacy, but give free vent to his feelings. Let him have recourse to invective, the usual evacuant of a baffled opponent, and the consolation of which he has already so often experienced. Nay, we advise him not to be disheartened, but to reiterate his “observations” again and again, regardless of their refutation: a drop wears even stone, by the frequency of its stroke; and as there are some fools in the world, the mere repetition of his assertions may in time make an impression, which individually they could not effect even on the weakest of his readers.

DEATH OF DR. ARMSTRONG.

It is with much regret that we have to mention the death of Dr. Armstrong, which took place at his house in Russell-Square, last Saturday. Dr. Armstrong was well known to the public, both as an author and a lecturer, and his premature decease affords a melancholy instance of a man cut off in the prime of life, and in the midst of a most successful professional career.

ANATOMICAL EXAMINATION OF THE DOUBLE FEMALE INFANT, RITTA-CHRISTINA.

THE body of the double female infant, Ritta-Christina, of which we published an account some weeks ago, (*Gazette*, for October 10th,) has recently been examined by a commission of medical men in Paris, and the following account drawn up by M. Geoffroy St.-Hilaire:

The first observation we made was, that Ritta had remained much more emaciated than Christina, at least in the portion of the body which evidently belonged to her, that is to say, the upper region, for the difference of these two beings was much more manifest towards the upper half, and their blending became more intimate as the lower parts were approached. Two anuses were recognised externally in the posterior part of the raphé, one on the right, the other on the left. According to the account of the nurse, the fæces were never evacuated except by that on the right, and, in fact, as we found in the sequel, this last alone communicated with the rectum, the other being the orifice of a canal opening into the vagina. The twins were united as two prisms might be, and had one pelvis with single apertures, but formed in some sort of two, joined vertically. The sensations produced in one leg were not perceived, except by the cerebral centre of one and the same head, as verified by MM. Larrey and Ribes. There were two hearts, but they were both enclosed in one pericardium. They touched at their points for an extent of 6 or 8 lines, in such a manner that that of Christina pressed upon and constrained the movements of that of Ritta: there was thus a heart on the left side, and another on the right. From their position resulted the trouble observable in the circulation of Ritta, and this circumstance explained the commencement of morbus ceruleus which had been remarked in her. There was only one liver, but obviously formed of two blended together, for there were two lobes of Spigelius. There were two stomachs, two small intestines, and those inferiorly were united into one. There were two uteri, one situated in the usual manner behind the bladder, the other quite behind, separated from the former by the rectum. There was one pectoral cavity, completely divided by one mediastinum, and separated, it is true, from the abdomen by a simple diaphragm, but at the middle the junction of two primitive diaphragms was recognised. Each might, therefore, have had its own particular side of the diaphragm, and M. Serres attributes to this the immediate cause of death, viz. paralysis of this muscle — paralysis which at first existed only on the side of Ritta, but which had extended to that

of Christina. As to the two hearts, nothing decided had been made out during life; the stethoscope indicated but one. Farther particulars are promised.—*Lancette Française*.

HOSPITAL REPORTS.

ST. GEORGE'S HOSPITAL.

Case of Scirrhus of the Pyloric Half of the Stomach.

THOMAS KENRICK, ætatis 70, a smith, residing at Knightsbridge, was admitted, Sept. 9th, 1829, under the care of Dr. Chambers.

His frame was emaciated; his complexion rather sallow; and the expression of his countenance of an anxious cast. He complained of loss of appetite, occasional pain in the stomach, and vomiting soon after eating, especially if his food consisted of meat or solid matters. The vomiting was not constant or regular, but would disappear for two or three days at a time, and again return. He suffered from eructations of air upwards, but never, according to his own story, could discharge it per anum. The pulse was weak; skin cool; tongue moist, but rather white; bowels tolerably open, without bulky motions; urine free, and high coloured.

On examining the abdomen, a circumscribed tumor, not prominent nor visible externally, was felt immediately beneath and to the left of the umbilicus. Its margin was tolerably defined and circumscribed; its consistence hard; its surface flattened; its extent greatest in the transverse direction, in which it might have measured some three or four inches. Towards the left it could be traced much higher than on the right side, and its upper edge, or termination, was less abrupt than that below; its inferior margin, which was semicircular, and had much of the sweep of the great curve of the stomach, was more rounded and more free than the superior; it was slightly tender on pressure, and moveable to a certain extent.

The patient stated that three months before his admission his health was unaffected; but soon after that period he began to be affected with loss of appetite, flatulence, and vomiting. He observed no tumor until three weeks before admission, when it was more beneath the left false ribs, but had subsequently undergone very little alteration in size. During the last fortnight he had vomited less; he never had hæmatemesis; knew no cause for his complaint; and had only drank "as much spirits as were necessary."

Little doubt was entertained of this being a case of scirrhus of the stomach; and the low situation of the tumor, to the left of the

umbilicus, appeared to point out the cardiac end of the organ as implicated. The following treatment was employed by Dr. Chambers:—

R Calomel, gr. v. Ext. Coloc. c. ℞ss. hac nocte.

• Haust. Salin. c. Magnes. Carb. ℞i. Tinct. Humuli. ℞ss. ter die. Broth, or milk diet.

On the 15th, the bowels being confined, he was ordered the calomel pill, as before; and on the 18th he is reported to vomit immediately after taking his food, which comes up mixed with acid; much flatus upwards: bowels open.

R Acid. Hydrocyan. (Medicin.) ℞i. Aq. distill. ℞j. ter die, intermissis alijs.

21st.—Much the same, save that the vomiting is not so constant. Bowels confined; looks much thinner.

Ol. Ricini. Aq. Piment. aa 3vi. Postea pergat.

On the 25th the dose of the prussic acid was augmented to two minims thrice daily; and on the 28th we find that he had had no evacuation from the bowels for two days; that he vomited some brownish poultice-like matter after breakfast, of an acid odour, and accompanied with a sense of burning in the region of the stomach. Pulse 58, small; skin cool.

Augeatur dos. Acid. Hydroc. med. ad ℞iij. in sing. haust.

Enema Oliosum statim et omni vesp. donec alv. respond.

Equal parts of Soda Water and Milk for ordinary diet.

Oct. 3.—Vomiting did not return after the 29th until yesterday afternoon.

Sinapisma Epigastrio. Pergat.

5th.—The vomiting and pain in the stomach are now very violent; the flatulence distressing; pulse 66, and very weak; skin clammy and cool; emaciation much advanced. The bowels acted after the enema with little feculent matter; urine high coloured and clear.

R Digital Pulv. gr. ½

Hyd. Ozymur. gr. ⅙.

Opii Pulv. gr. ¼.

Conf. Ros. q. s. ut ft. pil. ter die sumenda.

Rep. Enema ampulum omni vesp.

The vomiting was slightly relieved for a day or two, but again returned with as great severity as before, and much griping of the bowels. These symptoms increased so much that it was necessary to discontinue the pills above prescribed, and to substitute for them some hydrargyrus cum cretâ, and extract of poppies. On the 19th, being anxious to

leave the house, apparently from dread of dying within its walls, he was made an out-patient. Prior to his departure the poor fellow expressed a wish to be examined after death, as he said that he was certain his disease was mortal. He was at this time much thinner, and more debilitated than he had been upon admission; the vomiting was more constant and distressing; the pain in the tumor occurred in longer and severer paroxysms; in short, it was melancholy to observe the rapidity with which the disease was advancing.

He attended, we believe, for a short time as an out-patient, but some three or four weeks ago we were requested to see him at his own residence, as he was no longer able to quit his bed. We found him in a miserable state; emaciated to the utmost degree; vomiting instantly every thing he took, whether food or medicine; suffering from paroxysms of the most racking pain in the stomach or tumor; harassed with cough of an asthmatic character; and altogether reduced to the brink of the grave. As his nights were especially dreadful, we gave him strong doses of narcotics, with alkalies; and directed him to take arrow-root, with wine, in small quantities at a time, and as often as his stomach would bear it. Under this treatment he rallied surprisingly, and during the last fortnight of his existence he suffered comparatively nothing. His vomiting disappeared; the pain was greatly mitigated; in fact, was scarcely felt; his days were comfortable, and his nights no longer sleepless. The acidity on the stomach was removed, and the passage to the grave was smoothed, though of course no ultimate check could be given to the disease. He gradually became weaker; his intellects grew confused; and very early on the 4th of the present month (December) he expired.

We examined the body that day in the presence of Dr. Seymour, Mr. Babington, and Mr. Bushell.

The emaciation was extreme; the tumor, which had never changed its situation, and scarcely, if at all, augmented in size, was slightly visible externally, but readily felt.

On opening the abdomen, the disease was seen to be seated, as was thought, in the stomach. The pyloric half of this organ occupied exactly the situation of the tumor, and the pylorus itself was on a lower level than the umbilicus, and rather to the left. The parietes of the abdomen were not in the least degree adherent to the stomach, but the omentum majus was shrivelled up to a knotty mass, not a quarter of an inch in breadth, which cemented, as it were, the transverse arch of the colon to the great arch of the stomach. Independent of this connexion, there were no preternatural adhesions of the stomach to any of the neighbouring parts, nor any inflammation of them or of the peri-

toneum. On opening the stomach along its lower curvature the pyloric half of the viscus was found to be thickened, firm, almost cartilaginous in its section, and presenting the usual characters of scirrhus of the stomach. The distinction of the coats was not lost, but each appeared to be separately affected with the disease. The thickest portion was about the pylorus, where the diameter of the diseased coats was about a third of an inch. From this the disease diminished gradually as it formed towards the cardiac end. No unequivocal ulceration of the mucous membrane, or indeed of any other part, existed. The pyloric opening was narrowed; the duodenum was perfectly healthy; so was the œsophagus opening into the cardia.

The liver, mesenteric glands, pancreas, kidneys, colon, &c. were healthy. The abdominal aorta presented a few osseous scales, but on the whole was very healthy considering the patient's age.

The contents of the thorax were remarkably sound.

The head was not examined. Δ

SUSSEX COUNTY HOSPITAL.

Large Hydrocele.

SAMUEL MURRELL, ætat. 46, a strong muscular man, was admitted into this hospital with a swelling of the scrotum of four years' standing. Upon examination, an undulating feel was perceived. The circumference of the tumor was 26½ inches. The operation of paracentesis was performed, and about 56 ounces of watery fluid were drawn off. A dose of house physic was administered, and the part to be rubbed with Ung. Iodinæ 3j. mane et nocte.

Nov. 19th.—Going on well; complains of no pain.

This is a case of some interest, as it shows to what an extent the scrotum is capable of distention.

LITERARY INTELLIGENCE.

Dr. Conolly, Professor of Medicine in the University of London, is preparing for publication an Inquiry concerning the Indications of Insanity.

NOTICE.

A Well-wisher has our best thanks. The circumstance to which he alludes had attracted our attention, and been acted upon.

ERRATUM.

In our last, p. 335, for "spatio octo durum," read "spatio octo dierum."

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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SATURDAY, DECEMBER 26, 1829.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XIII*.

Mortification—its Divisions and Treatment.

THE next subject, Gentlemen, of which I have to speak, is mortification. Mortification is the death of a part, that is, of a part only; the death of a part with a peculiar change of structure in it, the result of a previous and peculiar vital action. By this latter circumstance mortification is distinguished from simple death—as in the case of an amputated limb, or from the temporary suspension of vital action, as when parts are frost-bitten; or from putrefaction, which frequently takes place after mortification has occurred, but which is by no means essential to the process; and, indeed, some kinds of mortification are to be considered as complete preservatives against putrefaction. It is also to be distinguished by the same circumstance from the chemical decomposition which is produced by heat, or the application of various chemical agents to a part of the body.

Mortification, gangrene, and sphacelus, are terms that are used nearly indiscriminately, yet perhaps there are some shades of difference between them. Mortification is the most general term; gangrene, perhaps, is more particularly employed to denote external superficial mortification; and the word sphacelus is employed in cases of an entire limb, or a considerable portion of a limb,

mortifying. We use the words *slough* and *sloughing* as synonymous with those that I have just mentioned; but these terms are English words, derived, according to Horne Tooke, from the Anglo-Saxon. Sloughing is equivalent to perishing, and the term slough denotes that portion of the body which has perished. Now you recollect that the word slough, in common language, is applied to the covering of the snake, which separates annually from the surface of its body; in short, slough denotes the portion that has perished, and is thrown off from the body.

Mortification consists in a cessation of the living action of the part; or more particularly, we may say, in a cessation of circulation in the part. The consequence of this is, that the part loses its heat, its sensibility, its power of motion, and its natural color; it becomes blue or livid, or brown, or blackish, or assumes various combinations of all these different tints.

When this cessation of vitality has taken place, the part then undergoes spontaneous or chemical change;—the textures that compose it become softened. Very commonly the part at the time it mortifies contains an abundance of fluids; all its vessels are replete with them. Now these fluids, as well as the solid parts which contain them, undergo a chemical change, and the textures of the body become reduced to a pulpy mass, that is exceedingly offensive. Gas is disengaged from the parts thus changed. Under other circumstances the part undergoes a change the very reverse of this, for it becomes dry, and shrinks or shrivels up; and instead of putrifying, it passes into a state in which you may preserve it—you may hang it up in the air, and it will keep in this state for years. Now these are two very different changes, both of which are called mortification, but the difference between them cannot escape the notice of the most superficial observer. Hence, from the most ancient times, you find a distinction between the moist or humid gangrene (*gangrena humida*), and the dry gangrene (*gan-*

* The observations made by Mr. Lawrence at the commencement of Lecture XIII. on Hectic Fever, were placed at the end of the one which preceded (see our last No.) as rendering the subject of Suppuration more complete; while the first part of the account of Mortification, though delivered at the end of the former lecture, is placed at the commencement of the present, so as to render the narrative more continuous.—R. G.

grena sicca). These differences are nearly equivalent to the distinction into acute and chronic gangrene, because the humid or moist gangrene is that which takes place from active inflammation, leaving the part with all its vessels filled with fluids; while the dry gangrene takes place in a slow and almost imperceptible way. All parts of the body are liable to mortification; I believe we may say *all*, but all are not *equally* liable. The cellular membrane is said to be the most prone to mortification. The skin may, perhaps, come next in order, but is much less liable to it than the cellular membrane. The blood-vessels resist mortification longer than any other texture; and thus, in cases of extensive sloughing, you often find the trunks of large vessels remain unchanged when all the surrounding tissues have perished.

This mention of the resistance of the blood-vessels to the process of mortification leads me to observe that the blood which is contained in those vessels becomes coagulated in the neighbourhood of the mortified part, and even to some distance beyond it; so that when the dead part comes to be separated from the living, there is no loss of blood in consequence of the opening of such vessels. This process of coagulation in the case where mortification affects the lower portion of a limb, will extend in the main artery very considerably above the part to which the mortification seems to extend externally. This is sometimes witnessed in cases of amputation of the thigh; where, though the mortification has not extended above the knee, the femoral artery has nevertheless been completely plugged up—filled with coagulated blood, so as not to require a ligature.

The part which has undergone mortification is separated from the sound part of the body by a process which will afterwards be described. I may only mention here that there is a considerable difference in point of the time that is occupied in this separation in particular cases. You may sometimes find a mortified part separated in a few days; and in other instances the separation will occupy many weeks, or even months: and a similar difference occurs in respect to the time that elapses before the changes that constitute a state of mortification are complete. There is a considerable difference, too, in the constitutional symptoms that are seen in different instances of mortification. In a case of slight mortification of the superficial parts, there are often no constitutional symptoms at all. When mortification is the result of high inflammatory action, there is generally a remission of symptoms on this taking place;—at the time that mortification occurs, the high febrile disturbance is greatly diminished; but if the mortification be not very considerable, the local inflammation may go

on nearly in the same degree, and there will then be little difference observed in the constitutional symptoms. Where any considerable part of the body has perished, we generally find that constitutional symptoms, of a very marked kind, attend the process. You will have occasion to observe, what we pointed out in speaking of sympathetic inflammation, the conformity between the character of the constitutional disturbance and that of the local disease; for where a part of the body perishes in this way you find general symptoms of debility are present—symptoms approaching very much to typhoid. The pulse is very feeble, intermittent, and irregular; the body is covered with a clammy sweat;—there is a complete loss of muscular power, sometimes even with syncope; hiccup takes place; the alimentary canal becomes distended with gas, approaching to the tympanitic state. In fact, all the circumstances denote the lowest degree of depression in the powers of the system generally*.

The causes of mortification are very various: hence the mode of its occurrence, the state of the affected parts, and the whole progress, are very different in different instances. Under the head of causes of mortification, we include a great variety of agencies which are capable either of suspending the circulation in a part, or of producing such violent disorder in the circulation as leads to its suspension; the nature of the affection being essentially a cessation of vital movement in the part. Now, among these causes, there are some which will always produce that effect whenever they are applied to the body; there are others that only produce that effect when applied under certain circumstances—that is, when they are applied to individuals in a particular state of health, or possessing a particular kind of constitution. Thus certain unhealthy states of the constitution, which are called in common language, and not very inappropriately, *bad habits of body*, are the most powerful predisposing causes of mortification. There are some states of the general health in an individual which will lead to the occurrence of mortification on the application of an immediate exciting cause. There are also certain states of particular parts of the body which are capable of producing a predisposition to mortification, and in which this will occur very easily. For example: it sometimes happens that the arteries of a limb become considerably changed in structure, and are converted into bony tubes—they become ossified; and when this extends from the trunk into the minuter ramifications, you cannot wonder that the circulation in the

* Up to this point, these remarks were made at the conclusion of the preceding lecture.

capillary vessels should be disturbed in such a way as to lead to mortification.

The division, then, of predisposing and direct or immediate exciting causes, is as important in mortification, as in the consideration of inflammation and other parts of pathology. Among the causes of mortification, we may enumerate the application of intense cold to the body, the infliction of any serious local injury, the direct interruption of the supply of blood to the part by pressure, or by ligature of the main artery of a limb. In the same way, certain diseases of the heart, particularly those which produce a contraction of the orifice of the aorta, are capable of leading to mortification. Two or three winters ago, there was a patient in the hospital who had a disease of this kind, and mortification of the toes came on in both feet in consequence of it. I had very little doubt that it was from disease of the valves of the aorta, so as to interrupt the passage of the blood into that vessel; but the body was removed so speedily after death, that I had no opportunity of examining.

Local pressure on a part in which there are veins and arteries both, such as the stricture in strangulated hernia, or general pressure on a whole limb, particularly when this is in a state of inflammation, leads to mortification. Now it sometimes happens, after serious injury of a limb, that a bandage is applied to it, and the limb which has received such injury swells; and thus the bandage, which was applied with only a proper degree of tightness at the time, forms an excessively firm ligature over the whole of the limb, and in this way it has happened that even the application of a bandage by a surgeon has led to mortification of a limb, and to death. The pressure on a part of the body by a particular position, long kept up—for instance, when the patient has been kept lying on the back, or hip, for a long time, by illness, the portion of the skin on which he rests will mortify in consequence of that circumstance. Violent inflammation results, which first excites the circulation and then leads to its suspension. It appears as if, under violent inflammation, the disorder in the circulation was carried sometimes to a pitch which the part is not capable of sustaining; so that the blood stagnates, and, in fact, the part perishes. Generally speaking, a high degree of inflammation is necessary to produce this effect; but sometimes mortification occurs with a degree of inflammation that does not appear to us to be of the very highest kind; and, in fact, we must consider, in relation to this mode of termination, the state both of the part itself and of the system in which the inflammation takes place. When a part has been in a weak state, a comparatively slight degree of inflammation will

be sufficient to produce mortification; and when a part is frost-bitten, the inflammation, although not violent, leads at once to mortification. In the case of an anasarctous limb, when a blister has been applied to it, or when, by scarification, we let out the fluid with which it is distended, it is by no means uncommon for mortification to be produced by these comparatively trivial injuries, and here you must explain mortification not so much by the amount of inflammation produced as by a comparison of the action with the degree of power in the part. I have already mentioned to you the fact of a change in the state of the arteries in which they become ossified: now certain other internal causes, the nature and operation of which are unknown to us, are also capable of producing mortification. Thus, feeding on ergot of rye, or that particular state in which that affection takes place which the French call *ergoté*, and which we call spur-dried,—in some way that we cannot explain, predisposes the individual to mortification; so that, in those countries where rye is the ordinary article of food in bad seasons, numerous cases of mortification have occurred obviously owing to this cause.

Mortification, too, sometimes happens in consequence of external causes, the nature and operation of which are equally unknown to us. Thus the contact of the skin with an animal substance, in certain states of decomposition, will produce a gangrenous affection which is called malignant pustule.

Now the various causes of mortification that I have enumerated, might be divided under two heads—*internal* and *external*. To the *internal*, those which are most important, belong—viz those particularly unhealthy states of the constitution which I have mentioned as giving a predisposition to mortification. The prognosis in mortification is generally serious. There are some mortifications, indeed, which are small in extent, which are derived simply from external causes, and which are unattended with any kind of danger. Thus a person may have mortification of the skin covering the tibia, from a blow upon it, and this is scarcely a dangerous occurrence. The skin covering an aneurism becomes thin when this approaches the surface, and it frequently mortifies; and the same may occur in the skin of an abscess when it points. These are examples of slight mortification from causes that merely act on a small part of the body, and which are attended with no kind of danger: but in other instances, and especially those in which mortification is referable to internal causes, and in which we cannot explain the circumstances in the way above alluded to, the prognosis is always very serious. The extent of the change which mortification produces—the depth to which it goes—the

importance of the organ which it affects—the state of the constitution of the individual in whom it occurs, are all points that must be attentively considered, before you venture to pronounce an opinion as to the probable result of any case.

In an affection, of which the nature and cause are so dissimilar, in different instances, you will naturally conclude that no one mode of treatment can be appropriate to all cases. Heretofore, attention has been chiefly given to the circumstance of the loss of vitality in the part affected, and the consequences which would attend the loss of vitality in those parts to which mortification seemed to be extending. Hence the idea has arisen, that means should be taken to stimulate and support the vital power in the part so circumstanced; and thus the general rule in mortification has been to employ stimulants—local and general—external and internal—to give bark, tonics, and cordials, as well as full and nutritious diet. This is by no means right as a *general* plan of treatment for mortification. Undoubtedly, in *particular* instances, it is requisite to employ remedies of this character, but we can by no means say that such practice would be right *generally*.

Again, some have asserted that mortification is always preceded by inflammation, and they have regarded in the affection principally the circumstance of its origin, and the inflammatory character of the primary action. It is, perhaps, rather doubtful whether this notion can be completely verified in all cases. It is somewhat doubtful whether distinct signs of inflammation do always precede mortification; at all events, we should certainly go very far wide of the mark if we attempted to treat all cases of mortification by antiphlogistic means. You can easily suppose that in that kind of extreme exhaustion of the vital powers which characterizes mortification, it would be actual madness to employ antiphlogistic treatment.

The general indications of treatment in mortification are *first* to prevent its occurrence; *secondly*, to arrest its progress; *thirdly*, to facilitate the separation of the dead parts from the living, and, under favorable circumstances, it is proper to accomplish that separation by surgical operation. These are the general indications which the treatment of mortification presents.

In considering the first, we must bear in mind, *the nature of the particular cause of mortification*. Antiphlogistic treatment will prevent the occurrence of mortification, when it is likely to come on in consequence of acute inflammation; but when a part is likely to go into mortification from exposure to cold, a judicious mode of restoring the temperature of the part will be most likely to obviate its occurrence; and so in each individual instance, the treatment calculated to prevent

the occurrence, must be adopted, from a consideration of the cause which produces the mortification, and of the particular nature of the affection in the part.

It is an important consideration what are the means by which the second indication can be employed, *that of preventing the progress of the affection*. Heretofore mortification has been regarded too much in the light of putrefaction, decomposition, and decay of the part affected. In the attempt to fall on those means by which its progress might be arrested, investigations have been made to discover those substances which would prevent the progress of putrefaction in dead animal matter; and it has been argued that the same means which would prevent this, would equally arrest the progress of mortification in a living body. Hence the class of what is called *antiseptics*, that is, of substances calculated to prevent putrefaction, has been principally relied upon in the external treatment of mortification; alcohol, camphor, turpentine, and bark, are agents that we well know are capable of preserving for a length of time dead animal matter, and of preventing those changes that would otherwise take place. Now, however, you are aware that the change which occurs in mortification is not to be considered as identified with putrefaction; and although those substances that I have mentioned would prevent putrefaction in a dead body, it by no means follows that they would prevent a living part, that was in a state of serious disorder, from going into mortification. With reference to arresting the progress of mortification, we want to discover, not what substance would preserve the part for a length of time when dead, but what will prevent the part while still living from losing its vitality and passing into a state of mortification. Now if you consider, that in a number of instances the living parts which are attacked by mortification, are in a state of high inflammatory action, you will immediately perceive that alcohol, turpentine, camphor, and such substances, cannot be well calculated to prevent the occurrence of mortification; and, indeed, we may dismiss altogether from the catalogue of local means the substances called antiseptic, which are so much recommended by old writers in the treatment of mortification. Their practice arose from an erroneous view of the subject. There are certain substances which have the power of correcting or of destroying the factor which attends the process of mortification. Charcoal is one: and thus the application of charcoal to a part which has mortified is often advisable, with reference simply to removing the offensive and annoying smell which accompanies the process. For this purpose you usually find that charcoal, whether in cases of mortification or any other kinds of diseased action which are attended with offensive odour, is recommend-

ed. But the most powerful agents in removing these unpleasant circumstances in mortification, are the chlorides of soda and lime, which have lately been introduced for that purpose by the French, and have been proposed by them, not only as applicable to mortification, but as disinfecting agents generally—as means capable of destroying offensive effluvia—effluvia that might produce disease under particular circumstances; and I believe they may be said generally to possess that power in a complete degree. Certainly, if you apply to a part of the body which is undergoing the process of mortification, cloths steeped in a solution of chlorides of soda or lime of sufficient strength, you find the unpleasant smell will be completely removed; and if you sprinkle a little of these fluids over the bed-clothes of the patient, the apartment will be rendered perfectly sweet. Now the French have gone farther, and said that these substances are not only capable of destroying the offensive effluvia in mortification and other cases, but that they also tend to arrest the progress of mortification; that they stop the diseased action, and if they did so, they would indeed be important remedies. Mr. Alcock has introduced this subject to the notice of English readers in a publication, in which he has collected the information chiefly of the French writers; and he is of opinion that these substances possess a power of acting on the living parts threatened by mortification, so as to check the progress of the disease. In instances where I have seen them used, it has appeared to me that they are to be regarded merely as disinfecting agents; that they are capable of destroying the offensive effluvia connected with the process of mortification, but that they do not possess the power of checking the progress of mortification by their agency on the living parts to which the mortification is extending.

The internal treatment must, of course, be various, according to the condition of the general symptoms. In cases of acute inflammation you may have to employ antiphlogistic means;—but in cases where the symptoms have assumed the typhoid character, which I have already spoken of, you must employ remedies of a contrary kind; bark, stimuli, wine, brandy, and, in fact, all the means, both in diet and medicine, which are capable of supporting the strength of the patient. Under such circumstances we cannot lay down any one general rule.

I now come, then, to the third indication, *the means of favoring the separation of the dead part from the living.* When the mortification is extending, we cannot accurately trace the boundary between the dead and the living parts; they seem to be confounded together; and at all events near the edge of what we conceive to be the dead part, we find that the living part, if it be not actually black or brown, is perhaps of a dark livid tint, and

seems just passing into those colours, and the surrounding living parts are perhaps vesicated. It is in this way that the mortification is carried on, affecting fresh parts in succession. But when the mortification has stopped, we then see a defined edge to the dead part, and we observe that the living portion, immediately adjoining the edge, assumes a brighter red colour; in fact, the boundary of mortification manifestly shews the occurrence of inflammation, and then the absorbents begin to perform the act of separation, and the division between them gradually deepens. Thus the mortified part is separated.

Now, in order to favor by local application the performance of this process, in general all we can do is to keep the part at rest and covered by a soft warm poultice: a poultice of bread or linseed meal answers the purpose extremely well. Sometimes it appears that the natural process by which the separation is effected does not go on so favorably as it ought to do, that the living parts which adjoin the dead are languid, that they require some stimulation; and in fact that the separation goes on better under the employment of local stimuli. An old application of this kind consisted in an admixture of yeast, or the grounds of stale beer, with bread or linseed powdered to make a poultice. This is called a yeast poultice, and this may be made rather more stimulating, if it be necessary, by an admixture of oatmeal instead of linseed. Yeast is employed in making the poultice instead of water. The dilute nitric acid may be beneficially employed to hasten the extension of the boundary between the dead and the living parts; a solution, containing four, six, and from that to ten drops to the ounce of distilled water, may be used, and lint dipped in it applied to the part. A little yellow basilicon at times will do much to assist the object in view. Balsam of Peru is another kind of application employed on such occasions, and if it does not stimulate the parts much, it at least tends considerably to correct the factor connected with the process of mortification. In some instances, powdered camphor is advantageously strewed on the surface of the parts in which the process of mortification is going on. It is rather a powerful stimulus, and should only be employed where the parts are particularly languid. These are the means by which we can favor, in the way of local application, the separation of a part which has mortified from the living portion of the limb.

Then as to the question of removing the dead part in case a limb is affected by mortification. The general rule has been not to perform amputation until the boundary between the mortified and the living part is decidedly established. No doubt this is a very wise rule. In instances where an entire limb is

the seat of mortification, it will generally be found that the state of the constitution—the health at the time—has had much to do with the occurrence, and with the progress of the affection, and therefore, until the mortification is decidedly arrested, you may suppose that the same disposition to mortify which has given rise to the first occurrence of the complaint, still exists, and consequently, if you amputate a limb under these circumstances, the wound made by the operation will take on the same condition, viz. mortification. Hence has been grounded the rule which has been laid down, not to think of performing amputation in a case of mortification until the boundary is completely and decidedly established. When the process of mortification has thus come to a natural crisis, you may suppose that a more healthy condition of the frame has occurred, and you may expect that the wound made in amputation will go through the process required for the cure in a favorable way. I have seen an instance in which the toe, for example, has been the seat of mortification, where the condition of the limb has appeared quite favorable, free from any thing like disease; where the patient has seemed in a tolerably good healthy state, and where from the very slow progress of the affection, it has been supposed that the disposition to mortify was worn out: in instances of that kind where amputation has been performed, although the boundary was not clearly established, frequently—I believe I may say generally—the process of mortification has come on in the stump, and the operation has terminated without any advantage. So that in all instances where mortification arises from or is kept up by *internal* causes—by an unsound state of the constitution, you must not make that the time for performing the operation of amputation. But in certain cases of mortification arising from *external* causes, this rule may be relaxed.

Having offered to you these general observations relating to mortification, I have a few words to say respecting some particular points.

Mortification may be produced by *cold*. Cold, whether it be applied to the body *generally*, or to any *particular* part, has in a very decided manner the effect of diminishing vital action. Thus, in countries that are very cold, where persons frequently have certain parts of the body exposed to a temperature below the freezing point, it is by no means uncommon to have such parts chilled, reduced in temperature, and in fact actually frozen. As this is a common occurrence in those countries, experience has taught their inhabitants what is the proper mode of proceeding when a part of the body is thus frost-bitten, in order to prevent it going into a state of mortification. Now it has been found, that if a part of the body thus

chilled is suddenly brought to the fire, it loses its vitality, and invariably mortifies; and the only mode to prevent this, is to raise the temperature of the chilled part *gradually*, by applying to it, in the first instance, snow or iced water, the temperature of which is only a little above that of the part itself. The state of freezing is thus removed; and then, though the vital movement had ceased for a time, although the circulation had actually been stopped, the movement and the circulation will return again, and the part recover without going to mortification. This is the mode of treatment in frost-bite.

In respect to the mortification that arises from *local injury* affecting any limited portions, there has but little been said in any book on the mode of treatment—the occurrence is unimportant, and no rules have been laid down.

The mortification which arises from *serious local injury*, and which affects an *entire* limb, is one of very great consequence. This comes on in consequence of extensive bruises or lacerations—in consequence of very severe gun-shot wounds—in consequence of bad fractures; these last sometimes produce a complication of displacements, with extensive lacerations of the soft parts, perhaps even the injury of some of the principal vessels and nerves. Under such circumstances, mortification will come on suddenly in an entire limb. The limb swells, and loses its natural colour; it becomes livid, black, and blue, and loses its temperature. A thin effusion is found disseminated through its textures, the cuticle separates, vesicles occur filled with fluid, and these changes in a short time will extend in the whole of the limb, and quickly reach the trunk of the body. This occasions that which is called *traumatic gangrene*—that is, gangrene consequent on a wound or violent local injury.

You may judge of the rapidity of the affection in this case by what Larrey mentions, who has given several instances that he had observed, principally in consequence of gun-shot wounds. He says that in some of these he has seen the process of mortification reach the trunk in six hours. If such a case be left to itself, death is inevitable. The only question is, whether under these circumstances, provided we see the case sufficiently early, we may attempt to save the patient by amputation; as for waiting for the boundary, here it is out of the question—to do so is to lose the patient. This, therefore, is a case in which it becomes a question whether we ought to adhere to the general rule that I previously laid down. Now here we must consider not merely the state of mortification in the limb, but also the condition of the patient's constitution in whom it occurs. There are certain individuals of a bad con-

stitution in whom traumatic gangrene may take place, and in whom the mere state of the system alone, independently of the serious local injury, would be a sufficient reason against performing amputation. I mentioned in a former lecture having seen one of Whitbread's draymen brought to this hospital, in whom, from a small graze of the leg, in about 48 hours mortification had extended to the whole of the lower extremity. In an individual in whom so serious an effect could be produced from so slight a cause, amputation would be out of the question. About three or four weeks since, I was sent for to see a gentleman without being aware of the nature of the case that I should have to witness, and on entering the room I was much surprised with the look of the patient. He began to speak, but he appeared as though he could hardly exercise the muscles of articulation. I put my fingers on his pulse, and found it sinking. The hand was cold, and I then found he had an affection of the other arm, which I was desired to look at, and when it was opened, to my great astonishment, I found the fore-arm mortified. It was cold, livid, and discoloured, and the process of mortification extending up the arm. On inquiring into what had occurred in this case, I found the gentleman was not aware of any other cause for this state of the limb except that some one, who passed him in the street, had struck him upon the elbow a few days before. The part became uneasy; it swelled, and he applied to a medical man, who sent his assistant, and he applied some leeches for him. But the medical gentleman himself, by whose desire I was requested to see the patient, had not seen him until less than 48 hours of the time of my seeing him, so that in that short period this traumatic gangrene had extended, as I have mentioned, from so trifling a cause. It is obvious, that under such circumstances, it would have been of no use at all to have thought of amputating the limb. In the feeble state to which this person was reduced, the mere operation would have been sufficient to extinguish life, and in fact the patient died within 24 hours of my seeing him.

A number of years ago an Irishman was brought to this hospital, who had fallen from a scaffold three stories high. He did not fall direct to the ground, but from the third story to the second, from the second to the first, and from thence to the ground, by which he received a severe injury of the wrist. He was under the care of Sir Ludford Harvey. I came to the hospital one morning, and was requested to see this patient—it was about three or four days after his admission. On the preceding night, at bed-time, the dresser under whose care he was had left him well; for he had seen him late, and he ascertained that he was then well. In the morning the patient told the

nurse that he had been in a dreadful state of pain all night; she came to the dresser, and at his request I went to see him. I found the fore-arm, from the wrist up to the elbow, enveloped by a bandage, which was not tighter than seemed to have been proper; but in consequence of the limb swelling, it had become too tight. On feeling the hand it was quite dead. On taking off the bandage, the fore-arm was livid and cold up to the elbow; the fore-arm in the lower part was not, perhaps, actually dead, but in a state immediately implying mortification. The discoloration of the skin reached as high as the shoulder, and this state of the limb had come on in twelve, or at the utmost fifteen hours. Now this was a stout young Irishman, of excellent constitution, and therefore a fit subject to try to save by operation; and although I could not see that the integument was perfect in color where it was necessary to amputate, yet I thought I would give him a chance. I removed the arm at the shoulder joint, and in fact the cellular membrane was discolored, and something of a yellow fluid was infiltrated in the part where I made the incision. The case succeeded perfectly, and the patient recovered.

I have seen one or two other instances in which amputation has been successfully performed in traumatic gangrene before mortification had stopped, and consequently before the line of demarcation had taken place between the dead and the living parts. Several such cases are recorded by Larrey, in his "Memoirs of Military Surgery," and I believe of late years there has been an accession of evidence on the same point; so that I have no hesitation in saying that in the case of a patient of a healthy constitution where gangrene arises, as in such cases from external causes simply, you must disregard the general rule that I before mentioned respecting the performance of amputation. The removal of the limb in many cases will be the means of saving the patient's life, which otherwise must be inevitably lost, from the serious nature of the affection, and the rapid way in which it extends over the limb.

In elderly persons mortification occasionally takes place—more especially in consequence of the changed state of the arteries of the limb, which become ossified; and this particular form has been called *gangrena similis*, or the gangrene of old age. A portion of the end of one of the toes, or some part of the foot, becomes livid, the cuticle is raised by a sanious fluid, and vesication takes place. The patient experiences perhaps little or no pain, and when you open the vesicles of the cuticle, and let out the fluid, you see that the skin which is exposed has lost its vitality.

Now the part thus mortified readily

shrinks and shrivels—it goes into a state of dry gangrene. The part thus mortified may be separated from the limb, and leave it in a healthy state; but then generally mortification occurs in some other part, and from the slight point at which it first begins, it probably extends and creeps along the foot, so that generally when you have an occurrence of this kind, you find the patient dies from it, although the mortification in the first instance may appear to be very slight in extent. It takes place with so slight a disturbance in the part, and so little constitutional affection, that at first you are hardly aware of the dangerous nature of the disease. Sometimes this gangrene of the toes of old persons is attended with very considerable pain, and it is this form of the affection in which Mr. Pott warmly recommends the administration of opium in large doses, on account of the pain with which the process is attended. You cannot do better than keep the part at rest, and cover it with a soft poultice, assisting the process by some means of a local kind.

I have mentioned that generally these cases terminate fatally. When you once see a limb vesicate, it is an evidence of the deranged constitution of the individual in whom it occurs; and however favorable the circumstances may appear for a time, you seldom find that the patient escapes. Some time ago I saw a gentleman in whom this affection had taken place on the under surface of the last phalanx of the great toe: he was between 50 and 60 years of age, and had been in the habit of living well, and by no means working hard; in short he was an indolent person, in a full corpulent state. He eat and drank well, and had got a red pimply face; but was surprised that any thing should be the matter with his toe. It gave him little trouble, and it was with difficulty he could be prevailed upon to keep quiet, and not to walk about. However the part mortified, and he was persuaded to go to bed. The mortified part separated, a granular surface was formed, and it appeared to be on the point of healing, when, without any apparent cause, the whole of the toe mortified up to its junction with the foot. A groove took place, and formed a separation between the living and dead parts, and the progress of the mortification was arrested. The soft parts separated, and I cut through the bone with a pair of pincers. A granulated surface appeared, and there was reason to suppose that it might heal soon. However it assumed a livid character, and a little further on a deep-seated supuration, of an unhealthy kind, with a formation of foetid pus, took place in the foot; and thus the patient was carried off.

In the course of the summer of 1828, I saw another gentleman, about the same age, and a very similar habit of body, in whom mortification took place at the side of the

heel. The dead part measured about an inch one way, and three-fourths of an inch the other. In this gentleman the process of separation took place in about two months, and he got well, and remains well to the present time. This is an instance which proves that this mortification does not invariably terminate fatally; but inasmuch as it is generally connected with an unhealthy state of the part, and inasmuch as it generally occurs in patients whose constitutions are impaired by sedentary indolent habits and full living, you will usually find that they terminate badly, although for the time the natural process of separation may take place, and the case may seem to be on the point of doing well.

I may just mention to you cursorily the occurrence of mortification from the application of animal matter in a state of decomposition, under the term *malignant pustule*. Under this name a certain state of the skin has been described by continental writers, and I fancy the case is more common with them than with us. It especially happens to butchers, and persons that have to do with hides, and it is said to take place more particularly where butchers have to slaughter animals that have died of disease.

I will only mention one case, that of a person who was employed in Leadenhall-market. He had to handle some very stinking hides that came from South America, and in doing so, one of these putrid hides swept by the side of his face. He was aware that it touched him, and that it left some nasty stuff, about one inch and a half square, under the lower eyelid. Where the surface of the skin had been touched, it first became red and swelled, and from that it became oedematous; the part that was red measured more than one inch each way, and a slough formed, which occupied not only that part of the skin, but that adjoining the cellular tissue: the part separated, and he lost a great part of the cheek; but the lower part of the eyelid was saved. That is a singular example of the deleterious kind of effect which decomposed animal substances has over the skin.

AN ESSAY

ON

ARTIFICIAL TEETH,

BY LEONARD KOECKER,

Surgeon-Dentist, Doctor in Medicine and Surgery.

(Concluded from page 178.)

On Pivoted Teeth, or the engrafting of Artificial Teeth upon the remaining Roots or Fangs.

THIS mode of inserting artificial teeth

has been adopted and sanctioned by custom from time immemorial; and although, on a superficial view, it might, from its great simplicity and natural appearance be considered as a very convenient process, it will be found on a deliberate consideration to be by no means founded on good pathological or surgical principles.

In referring, not only to those works on dental surgery, which have been written more for the interest of the authors than the promotion of science, but also to all others which treat on the mechanical part of dental surgery, which I have had an opportunity of perusing, I find that they all consider it an useful and desirable method of restoring lost teeth.

Mr. Fox, in his "Natural History and Diseases of the Human Teeth," part 2, p. 139, in referring to a tooth inserted in this manner, says, "it may continue for many years without occasioning any trouble, or requiring any repair. In this mode several teeth belonging to the same person may be replaced which cannot be discerned upon the most minute inspection;" and the view of this excellent dental surgeon may be regarded as the opinion generally entertained, not only by practical dentists, but also by the public at large.

For my own part, however, I cannot help differing from the opinion of this operation, so generally received, as I conceive it to be one which requires great restriction, and which is frequently highly objectionable, being always attended with more or less sacrifice of health, and sometimes even with fatal results, although I will not deny that it has frequently met with considerable success, and has not been followed by great inconvenience, but that such artificial teeth have been used for many years without requiring much repair. I have in my own practice frequently applied these teeth, and almost invariably with a favourable result; and have often found them in a good condition even after a period of many years.

Artificial teeth of this kind are frequently used after the crowns of teeth have been so destroyed by caries as to leave little more than the roots in the sockets, and are mechanically inserted in the following manner.

All the irregular and carious remains of the crown of the tooth are filed away close to the gum. The natural cavity,

or canal of the fang, is then prepared to receive the pivot by passing a small branch into the cavity, and drilling it into a round hole. The crown of a human tooth, or a mineral tooth, resembling the one lost, is then made to fit to the fang; a pivot, somewhat shorter than the cavity in the root, is introduced into it, and the artificial tooth inserted by means of the pivot upon the root, where it is then properly fastened.

Having given a concise description of the mechanical process of this operation, it remains for me also to place the same before the reader in a pathological and chirurgical view, and to point out its effects upon the parts involved in the operation as well as upon the constitution. In my "Principles of Dental Surgery, &c." p. 254, I have more extensively treated of the morbid effects of dead teeth and roots, to which I beg to refer the reader; and I shall here only remark, that by the insertion of artificial teeth in the above manner all the morbid effects of such roots must be augmented and aggravated.

By the insertion of the pivot in the canal of the root, the natural curative process, or the decomposition and absorption of the fang, is prevented or retarded; while on the other hand, the most convenient outlet for a constant and regular discharge of the matter, which is always produced by the carious root in the surrounding soft parts through its canal, is obstructed. The matter thus confined penetrates through the sockets and gums, and forms gum-boils, or small fistulous abscesses in the neighbourhood of the root, producing inflammation of the gums, and caries of the sockets, much more frequently than when these structures are left under the exclusive influence of disease.

In many instances, and more especially if only one or two teeth have been inserted in this manner, these morbid symptoms remain in a chronic state for many years, and the patient experiences apparently very little or no inconvenience. In others, even after the insertion of a single tooth, they become more acute and extensive; and painful swellings of the face and jaws, sometimes accompanied with great disturbance of the system, are consequences of frequent occurrence. If a greater number of teeth have been inserted with pivots, the symptoms are generally aggravated; the whole mouth becomes more or less

affected; the gums become spongy and painful; the sockets morbidly softened; the periosteum becomes thickened and relaxed; the jaws are affected with chronic pains; and these local affections are followed by a train of general symptoms of various descriptions. These symptoms are of most frequent occurrence in weak and irritable constitutions; and it is impossible to say to what extent the mischief may proceed if the fangs are not removed, which, although it almost invariably produces a perfect cure of the local diseases, is too often delayed till the patient has experienced all the evil effects above stated.

Several cases have been related strikingly illustrative of the danger connected with the insertion of these teeth, in my work on "Dental Surgery." The first of these is that of a lady in Germany, who suffered a most deplorable death in consequence of the application of one tooth of this kind; and the other that of an American lady, whose face was greatly disfigured by the insertion of one incisor tooth. And case No. 1 of this Essay, as well as the subsequent cases, Nos. 3 and 4, selected from a considerable number which I have had an opportunity of observing during my practice, are equally illustrative of the pernicious effects following the injudicious insertion of pivoted teeth.

CASE III.—Mrs. —, of Philadelphia, about 40 years of age, under the medical care of Dr. Chapman for a train of those nervous, rheumatic, and dyspeptic complaints which generally baffle all medical skill, was requested by that eminent physician to consult me respecting her teeth in 1820.

By examination I found that she had the four upper incisors, and two cuspidati, restored by artificial teeth ingrafted on their roots. Finding the artificial teeth to be loose, and observing several gum-boils about the roots to which they were attached, I became suspicious of the cause; and on a careful investigation discovered that all the sockets belonging to the six roots in which the pivots were introduced, were perfectly carious; entirely detached from the jaw; and, together with the artificial teeth and dead roots, were only held in their places by the gums. Having lost the greater part of her molares, the lady could not prevent, during speaking and mastication, the contact of the artificial teeth;

and the constant motion thereby produced kept up a permanent irritation, which could not fail, in combination with the very diseased state of the mouth, to produce the most distressing local and general symptoms. I of course advised the immediate removal of these roots; but, unfortunately, the lady was in that nervous and irritable state of mind and body that all the combined persuasion of her physician and myself could not induce her to allow me to remove them; and she continued the use of her artificial teeth for some years longer, submitting, at the same time, to the continuance of all her sufferings.

CASE IV.—Miss —, about 28 years of age, although originally of a very strong constitution, was in so precarious a state of health that she had not left her house for two years: great debility, frequently accompanied with fever, and all those painful and distressing symptoms which generally attend the highest degree of nervous irritability, had gradually so debilitated her constitution, that her medical attendants had declared her to be in a consumption, and the patient, as well as her friends, had for some time despaired of any permanent recovery, but were endeavouring to reconcile themselves to the painful result which they considered to be at no great distance.

To this view, however, one of her physicians would not positively agree, but considered that her sufferings might be principally founded on dyspepsia, and a long train of those symptomatic affections concomitant with that disease. This gentleman being a staunch adherent of my theory of the great influence of diseased teeth upon the constitution, he suspected that her general health might be suffering from the diseased state of her mouth, and that by proper treatment of these local diseases, great progress would be made towards her recovery, and therefore requested that I should be consulted. The lady had suffered principally from the irritation produced by the violent and unskilful insertion of seven artificial teeth with pivots upon the roots of the four upper incisors, two cuspid, and one bicuspid tooth. I proposed the removal of all the fangs on which the artificial teeth were fastened, as well as of a few more diseased teeth and stumps which had also been very improperly permitted to remain.

January 20th, 1828.—The lady gladly acceded to my proposition, and nine carious teeth and roots were immediately removed.

February 29th.—Visiting the lady again at her own house, I found her general health greatly improved, and her mouth in a sufficiently healthy state for the scaling of her remaining teeth.

March 12th.—The health of the patient had so much improved that she was able to ride a considerable distance to town, and submit to a fatiguing operation for the preservation of her remaining teeth.

April 12th.—Some of her teeth were rendered sound by filing and stopping some carious places with gold.

26th.—The patient had almost completely recovered her health; one tooth was rendered sound by stopping a carious cavity with gold; her whole mouth was now in a perfectly healthy state; and the impression for a set of artificial teeth was taken at the same time.

May 15th.—The lady was provided with a whole set of artificial teeth, which restored her powers of mastication and her original appearance, and she has hitherto uninterruptedly enjoyed good general health.

On the Principles for the Insertion of Pivoted Teeth.

From the above statement and facts it seems to be sufficiently evident, that if the application and use of such pivoted artificial teeth is not always accompanied with real inconvenience and danger, but frequently even with considerable success, that this success is at least very uncertain, and that, moreover, in some instances, their injurious tendency is very great, and highly destructive to health, and even life. It would, therefore, be better to abandon the operation entirely if it were possible; but such are its mechanical advantages and its immediate apparent good effects, that it would be most difficult in many instances to dissuade both the profession and the public from the adoption of an operation which has been so long sanctioned by custom; while its ultimate and injurious effects have remained unobserved, and have been almost invariably ascribed to erroneous causes; I shall, therefore, content myself with attempting the amelioration of a treatment, the perfect removal of which is not attainable; and with this hope. I

shall now state those principles which I have adopted for the insertion of this kind of artificial teeth during my own practice, and by which I have obviated its injurious consequences.

In the choice of this operation, we should always be mindful of the fact, that although health is often strong, and nature often kind enough to bear abuses, that there is also a certain degree of this endurance which cannot be overstepped without producing dangerous consequences.

The indications for pivoted teeth, or rather the circumstances which may be deemed as admitting of their insertion, as well as the indications for their rejection, should always be the objects of deliberate consideration, previously to their application.

It should always be viewed as a very improper practice to apply these teeth indiscriminately; and, in order to proceed with safety, the following questions should receive the most deliberate attention before the adoption of this treatment.

1. Which of the human teeth are, and which are not, properly calculated, from their situation and the formation of their roots, to receive artificial pivoted teeth?

2. To what extent may this treatment be judiciously carried, and how many teeth may be inserted with safety in the same mouth?

3. Under what circumstances the application of such teeth may be admitted, and under what it should be rejected?

In reply to these questions, I must give it as my decided opinion, first, that neither the situation nor the form of any of the teeth of the under-jaw, nor any of the molar teeth of the upper-jaw, warrant the insertion of this kind of artificial teeth; and that I have therefore made it an invariable rule to apply them exclusively in those cases in which they were properly indicated for the restoration of the upper incisor and canine teeth. Secondly, that having very frequently seen considerable injury and danger accompany and follow this operation, in those instances in which a considerable number of pivoted teeth had been inserted in the same mouth, I have made it a constant principle not to exceed the use of three teeth of this kind for the same individual; and have always advised the extraction of the roots,

and the insertion of other artificial teeth, where any number exceeding the above was requisite. Thirdly, that I consider it particularly necessary to take the state of the health generally, as well as of the mouth, into consideration, previously to the application of such teeth. Delicate, irritable, nervous, and inflammatory constitutions, I have always deemed unfit for this operation; as well as those persons in whom the teeth and gums were much diseased.

In preparing the root for the reception of the pivot, every unnecessary irritation should be avoided, and no violent means should be used to remove the remaining irregularities from the root by means of pincers, but they should be removed with a half-round file, of a size well calculated to give the fang the proper form, and the cut of which is neither too fine nor too coarse. The natural cavity should be carefully and gradually enlarged with broaches of different sizes, and of such forms as to render it, if possible, equally wide throughout.

In the preparation of the artificial tooth, particular care should be taken to make it fit exactly to the root, and to give it such a form and direction as to prevent every pressure upon the natural teeth on both sides, as well as any contact, and more especially any striking of the opposite teeth upon the artificial ones.

The best mode of fastening artificial pivoted teeth, is that which produces the least irritation; and particular attention to this part of the operation is of great importance.

To attain this, inflammation or swelling in the gums and sockets belonging to the fangs should be prevented as much as possible: and with this view, I have always endeavoured to make the cavity of the roots an outlet for the matter, as well as the receiver for the pivots of the artificial teeth, instead of obstructing the natural mode of its discharge; a point which will be best obtained by a particular attention to the following rules, which I have adopted for many years.

1. After a careful preparation of the extremity of the fangs and the cavities for the reception of the pivots, as well as a perfect adaptation of the artificial teeth, with a view to allow the roots to recover from the unavoidable irritation produced by the filing and drilling, I

have preferred delaying the insertion of the artificial teeth for two or three days; and to excite the discharge through the roots, I have requested the patient to keep a small lock of cotton in the cavity, which generally produced the desired effect. Secondly, I have made it an invariable principle to insert the tooth in such a manner that the patient should be capable, after receiving the necessary instruction, to remove and replace it at pleasure. For this purpose, I have found it best and most effectual to wind a little cotton round the pivot, which should be filed somewhat rough, previous to its insertion into the fang. Thirdly, the artificial tooth should be inserted without any violence, and only with sufficient firmness to prevent it from moving, and should be taken out every fortnight by the patient, in order to clean the cavity of the roots and the artificial teeth, and to change the cotton; which having been carefully done, the artificial teeth should be immediately replaced.

Should, however, the operation be followed by any inflammation or swelling of the gums, the patient should be directed to remove the artificial teeth immediately, and to excite the discharge of any matter that may have been formed through the cavity of the roots, by keeping that canal perfectly clean, and by frequently washing the whole mouth with a mixture of one part of tincture of myrrh and three or four parts of warm water; nor should the artificial teeth be replaced until the gums and sockets have perfectly recovered from the inflammation.

The use of pivoted artificial teeth should not be persisted in for too long a time; but when the roots which receive them become loose, when the gums become considerably inflamed and swelled, and when their dark and morbid appearance evinces a carious state of the sockets, they should be immediately extracted; and after a perfect restoration of health, artificial teeth, fastened with springs, such as have been already described, should be used in their stead.

By a strict adherence to the above principles, I have always succeeded in preventing every injurious effect in my own practice; and I have no hesitation in asserting, that in all cases which have been followed by very injurious and fatal consequences, such as have been

tated in a former part of this essay, the result can only be ascribed to the culpable omission of proper surgical principles, or by the use of some positively violent and destructive modes of treatment.

Such injudicious methods, I regret to state, are not so uncommon as their absurdity and impropriety might induce us to believe; and I beg to name only a few of the most injurious kind—namely, the use of a bow and drill, or gimblet, for the preparation of the hole in the root to receive the pivot; a practice which, from the violent and rapid manner in which this apparatus cuts into the root, must inevitably produce great pain and inflammation. These are, however, the least injurious effects resulting from such injudicious proceedings; and I have not unfrequently found, after the extraction of such fangs which had produced extensive inflammation and abscess, that the drill had passed through the lateral part of the fang, and penetrated the bony structure of the socket; in other cases, that it had perforated the whole of the root, and passed into the cavity of the jaw; and sometimes I have found the root split into two pieces. Another mode, more culpable, and yet more injurious, is that of inserting the pivot with great force, and even by making use of a hammer to fasten the artificial tooth.

The materials for pivoted teeth are natural human teeth, and those of a mineral or terro-metallic composition. Some dentists apply the sea-horse and sea-cow teeth; but these materials are always more or less objectionable, as they are far less durable and less natural in their appearance than the others.

The pivots should be made only of fine gold, or platina; every other metal, such as brass, copper, silver, and even inferior gold, are highly objectionable, being more or less liable to corrode.

There is, however, a practice adopted by some dentists which is still more improper—namely, the use of pivots made of wood. These pivots, after insertion, expand considerably, from the moisture of the mouth, and, consequently, generally remain perfectly firm in the roots for several years; which misleads, not only the patient, but also the dentist, and induces them to consider the case very successful, until they are at last undeceived either by finding the root split by the great swelling of

the pivot, or nearly destroyed by the ultimate rapid decomposition of the wood in the cavity: a process which is very apt to produce very serious inflammation, not to mention the disagreeable smell which it unavoidably gives the breath.

Old Burlington-Street,
Dec. 1829.

ON THE USE AND ABUSE OF MERCURY,

And some other popular Medicines, in various Disorders, and Morbid Conditions of some of the most important Viscera.

BY ROBERT VENABLES, M.B.

St. Mary Hall, Oxford; Physician to the Chelmsford Provident Society, &c. &c. &c.

It has been supposed, by many practitioners of experience, that the exhibition of calomel, or any other active mercurials, during scarlatina, measles, and some others of the exanthemata, or during the convalescence from these disorders, is apt to induce cachexies of various descriptions, and which will infallibly manifest themselves at some period or other, sooner or later. Hence many proscribe mercury altogether in such cases; and are thus deprived, in many instances, of the sanative agency of a very useful and very powerful remedy. Although I am not prepared to admit the propriety of so exclusive an interdiction, yet I am fully satisfied that mercury, in many cases of the above description, exerts a most pernicious influence, and often establishes fatal diseases in the system. This is peculiarly the case among children of a weakly irritable constitution, and among adults also of similar temperament. Nor are these deleterious effects confined to the exanthemata alone; for I have frequently noticed them, especially among children laboring under what is commonly termed "nervous irritation."

The terms "nervous irritability" and "nervous irritation," have been regarded, and are still indeed considered, as mere cloaks for ignorance—terms expressive of no known morbid condition, nor indicative of any defined pathological fact. With them we usually associate the ideas of morbid excitability—a peculiar susceptibility; as it

were, of febricular manifestations, and irritability both of temper and constitution. If we admit such a definition as comprising the whole or even the principal phenomena, it would lead to no practical inference of any value. Indeed experience fully proves that mercury, though occasionally hurtful in such cases, is, generally speaking, one of the most effectual remedies we can employ; whether as an alterative and constitutional corrective, or as the motive agent in alimentary accumulations, and as the means of exciting the natural and healthy operations of the digestive organs. We must, therefore, look for some more decisive means of discovering those conditions of system which should deter us from the administration of mercury during the prevalence or convalescence from eruptive and other analogous disorders.

I am not aware of any obvious symptom so far characteristic of this condition as to afford even presumptive evidence of its existence. It is imagined by many, that the color of the alvine evacuations often affords satisfactory proof of the necessity of a mercurial stimulus. The color supposed to indicate this necessity is a darkish hue, comprising, however, every grade from jet black to an almost perfect white or clay colour. A very frequent appearance is that of green, and an intermixture of this colour, in various proportions, with black. The color of the stools, in such cases, is considered as affording evidence of a defective or deranged action of the liver, and requiring the mercurial influence for its correction. But in many cases, the practice not only fails, but brings the unfortunate sufferer to death's door. The stools of children are frequently, when voided, of a grass-green; and in other instances, although of a bright yellow when passed, assume the grass-green hue at an interval longer or shorter, according to circumstances. The little patient is sometimes peevish, impatient, irritable, and feverish; and in such circumstances, generally very restless and discontented. Sometimes they are dull, languid, stupid, or even comatose; and these two morbid states alternate with each other. Some, looking to the stools, denounce the liver as the seat of the disorder, while others, looking only at the cerebral symptoms, declare the disease hydrocephalus.

Should mercury happen to be administered in active doses, and the patient happily surmount its destructive influence, hydrocephalus is pronounced curable, and mercury its specific. Hence false inferences in pathology, as well as therapeutics; false, because the symptoms are inadequate and the reasoning imperfect.

There can be no doubt that discoloration, depending upon deranged function of the liver, or that a morbid condition of this viscus, will require, and may often be benefitted by, mercury; but there is a very important difference between the two cases. The pathology of the former case is as follows:—The intestinal canal is in a state of very great irritation, and its functions (particularly digestion)* are but very imperfectly performed. Hence the bile is mechanically, rather than chemically, mixed with the food; and in this way the whole is passed along the canal without being thoroughly digested. Dr. Prout has most satisfactorily proved that pure muriatic acid is secreted into the stomach. This is sometimes abundant, and, acting on the bile, produces the grass-green, which is taken as evidence of hepatic disorder. As the mucous membranes of the intestines are, under such circumstances, in a state of high irritation, mercurials (especially the more irritating preparations, as calomel, &c.) and drastic purgatives of every description, often do irreparable mischief. The consequences are cutaneous ulcerations, aphthous ulcerations of the tongue, throat, and fauces; dysenteric discharges, and gangrenous ulcers of the intestinal canal; fevers, comatose affections, insanity, permanent idiotcy, but most frequently death.

It may, perhaps, be asked, if the color be owing to the reaction of muriatic acid upon the bile, how is it that the evacuations are occasionally yellow when discharged, or why is not the reaction immediate in one case as well as another? To this, a perfectly satisfactory answer, perhaps, could not well be given. However, it may be observed that the urine is sometimes mixed with bile, and muriatic acid added will often detect it, by an instantaneous reaction. But, as Dr. Prout very accurately states, sometimes hours will elapse before the

* Under this term I include, not only the changes on the aliments, but their assimilation.

characteristic reaction appears, and occasionally it will not appear at all. The object here, however, is not to explain anomalies, but to reconcile doubts and difficulties, by an appeal to analogies and admitted facts. Suffice it to say, that I have satisfied myself of the occasional presence of free muriatic acid in the grass-green evacuations of infants. In such cases, I believe, abstractedly speaking, mercury is seldom necessary—generally prejudicial. If necessary, the mildest preparation should be given; and I know of none that agrees so well as the grey or ash-colored oxide, which, however, should always, under such circumstances, be combined with chalk, or magnesia*.

There is a certain description of pale, sallow, leuco-phlegmatic appearance, which often contra-indicates the use of mercury. This, however, is neither sufficiently definable nor sufficiently characteristic to be depended upon. But it will often lead to a suspicion of that condition, which a more minute and unequivocal mode of investigation will confirm.

I have found the urine to afford the most certain and the most decisive evidence of the existence of such disease, and of that morbid condition of system which almost invariably precludes the exhibition of mercury. If the urine contain albumen, we may generally decide against mercury. I have long considered albuminous urine as contra-indicating any active exhibition of mercury; and in my Clinical Report on Dropsies, published in 1824, I have supported this view. Indeed I have particularly noticed one case in which the urine, being albuminous, a combination of opium and mercury, prescribed for a venereal affection, appeared to me to bring on anasarca and tympany, which ultimately proved fatal. At the time I published that report, I was not so fully satisfied of the necessity of wholly proscribing mer-

cury in dropsies with coagulable urine. I then believed that a very mild alterative course was not only safe, but frequently useful, by exciting the cuticular functions and other secretions. Since the publication of that work, Dr. Bright has concluded, from numerous post-mortem examinations, that in dropsies attended with coagulable urine, the kidneys are always organically diseased. Dr. Christison has still farther confirmed this opinion; and although his dissections and cases will not warrant organic disease of these organs in the usual acceptation of the term, yet they fully prove morbid condition of structure, which cannot be considered as perfectly coinciding with, or limited to, mere inflammation.

I have been long in the habit of attending to the qualities of the urine, and I seldom neglect any opportunity of examining this fluid. Experience and observation have fully convinced me of the fact of albuminous urine being mostly connected with disease, whatever its character, of the kidneys. If the albuminous condition be fixed and obstinate, and well marked, we may generally infer organic disease of the kidney associated with disease of the bladder. This will be found true whether dropsy be present or not; and such cases mostly terminate fatally, or sink exhausted by a catarrhal discharge from the bladder, attended with ulceration, and a variety of other complicated affections of this viscus*.

* I cannot omit this opportunity of relating the following history as confirming this view, and of shewing how uncertain an opinion founded on general symptoms, compared with that founded on unerring principles, may prove. I was requested by a respectable surgeon to visit a patient of his, a coachmaker's wife, labouring under symptoms of urinary irritation, and to whom he was pleased to recommend me, as having made these disorders objects of unusual attention. On examining the urine, I found it of low specific gravity, and containing a considerable quantity of muco-albuminous matter, the former derived most probably from the bladder, the latter from the kidney. She complained of great tenderness in the right side. The soreness followed the direct course of the ureter, from the kidney to the pelvis, and no doubt depended upon inflammation, or probably ulceration, of this duct. The urine occasionally contained flakes, and sometimes small coagula of blood. The latter, however, I only observed on two occasions. The uterus was also affected, and the functions of the liver were occasionally deranged, but there was no tenderness of the hypochondrium, nor any tumefaction. I told my friend that the kidneys were diseased, and also the bladder, and that the latter was probably ulcerated, or would speedily become so. Recommended not to be imposed upon by the yellow coating of the tongue, and to avoid mer-

* The hydrarg. c. creta, and the hydrarg. c. magnesia of the pharmacopœias, are generally very inefficient preparations, and, for the most part, consist of mere mechanical mixtures of these earths with metallic quicksilver. The same objection applies to the blue pill and mercurial ointment. I therefore always direct the extemporaneous combination of the oxyd. hyd. ciner. with the earths in the requisite proportions. As a substitute for the blue pill, I prescribe the requisite quantity of the oxyde, with a grain or two of extract of henbane. These preparations are more chemical and more uniform in strength and effect.

The quantity of albuminous matter may (*cæt. par.*) be regarded as in some degree a measure of the diseased state. If the quantity be small, and its presence discoverable only by the more refined modes of chemical analysis, the disorder of the kidneys may be considered as almost mere functional derangement, and by care and attention at this period, the tendency to assume a severer form may be at all events suspended, or possibly wholly removed. But if the patient be imprudent, or be improperly treated, the kidneys and bladder will ultimately become organically deranged, and most likely a sudden termination succeed.

The serous condition of the urine may be determined by the coagulability, by heat, and by nitric acid. Frequently, however, it will be necessary to concentrate the urine by evaporation, before these re-agents will manifest the serous character of the urine. The prussiate of potass with diluted acetic acid will detect albumen not discoverable by any other means, and in some instances time is necessary to its development.

In general where there is a disposition to general dropsy, the urine is of

cury, as a poison. The patient was bled and leeches upon the right side, over the seat of the pain, and a palliative course of medicine directed. The symptoms, however, did not improve, and the patient was at last confined to bed. In consequence of some supposed inattention, either on my part or that of my colleague, the husband suddenly sent for another physician, who looking at the tongue, and laying his hand on the side, declared the disease to be seated in the liver, and that our views and opinions were all chimerical. So prejudiced was the husband, that he would not even take the trouble to inform either me or my colleague that he had placed his wife under the care of a more favoured practitioner. Accordingly, we were much surprised on making our accustomed visit the next day to learn, that we were both discarded in disgrace, as ignorant of the nature of the case, this gentleman neither having communicated nor requested any interview with us. I could not help, however, declaring on parting, that, liver affected or not, if mercury were used, the unlucky patient would not long trouble the husband, nor be an object of professional anxiety to the attendant; and that before many days elapsed, he would have unequivocal proofs of urinary disease. In about a fortnight after, the husband meeting me accidentally, told me that my prediction was partly verified, for that the urine was in such a state, and the stench so intolerable, that the house was scarcely habitable. He requested me to call and see his wife, but this I declined. I know not whether mercury had been given or not, but in about a week after, I learned that she died. Perhaps, it would have been as well to have adhered to the solution of chlorine, which I had prescribed for the bilious symptoms. I believe no morbid examination was made, which is rather singular, as the opinions of the first physician were disputed by him who succeeded.

low specific gravity, from 1.009—1.0015 the urea in small proportion, and the saline principles, as might be suspected from the low specific gravity, deficient. When serous urine is of high specific gravity, and contains urea in great excess, and abounds in saline principles, the bladder generally is more or less diseased; and often diabetes is present. It is not necessary to constitute diabetes that the urine should be in excessive quantity; on the contrary, diabetes, that is, a saccharine condition of the urine, may exist, although the quantity should not exceed, nor even amount to two pints in twenty-four hours. I have lately met with two cases of this description. I had no idea at first of the nature of the disease; but finding the specific gravity of the urine from 1.028 to 1.030, without any excess of urea, and not containing a sufficiency of saline principles to account for the density, I examined it more particularly, and discovered sugar in each specimen. In one of these cases, the bladder had been severely affected at a remote period, and the gentleman was, by the advice of a physician, on his way to London to be operated on for stone, when he was stopped by a professional friend, who directed some medicine which completely relieved him. In this case, I have had the advantage of the opinion of my friend, Dr. Prout, who has informed me that he has lately met with several cases of a similar description.

In cases of the latter description, the bladder is often tuberculated or knotted, and throws off a kind of fatty matter, which is mixed with the urine. In others, blood is voided, and then there is usually a fungous tumefaction in some part of the bladder. The symptoms often resemble those of stone, and can only be distinguished by a chemical examination of the urine. I have deposited in the museum of the Royal College of Physicians a diseased bladder, in which there was not only a fungous excrescence as above described, but a most curious cyst, formed by the mucous lining, and which would have concealed and protected a calculus from the sound. As the preparation, with the history of the case, is in the possession of the college, I consider farther allusion unnecessary.

When there is an increase of mucus or a discharge of pus from the bladder, the urine is often neutral or alkaline,

and after standing for some time, becomes spontaneously alkaline. The alkaline properties arise from the evolution of ammonia or its carbonate, formed by the reaction of the fixed alkali of the mucus upon the urea. All these conditions of the urine contraindicate the use of mercury under any form, or in any dose. When I published the "Clinical Report on Dropsies," I considered a mild or alterative course of mercury admissible, if the other symptoms indicated it. However, subsequent experience and more extensive opportunities have convinced me of my error, and I feel now fully satisfied of the injurious effects of mercury in all cases of the above description. Should hepatic derangement of any kind seem to justify a recourse to mercury, I believe a solution of chlorine will be found to answer every useful purpose, and much more safely than mercury. In dropsies of this description, I am inclined to believe even squill injurious. I know that Dr. Christison has published an able report in the *Edinburgh Medical Journal*, upon Dropsies arising from organic disease of the kidneys, and in which he questions the correctness of the opinion advanced by me, and subsequently by Dr. Bright, as to the injurious effects of mercury in dropsies attended with albuminous urine; but it appears to me as equally admitting of question, whether the cases which he has published do not confirm, rather than invalidate, the principles of caution and practice which we support.

In scarlatina, measles, and other eruptive fevers attended with coagulable urine, mercury is apt not only to excite ptyalism or salivation, but to bring on exulcerations, scrofulous tumors, and abscesses, (or at least these affections partake of the scrofulous character), and dropsies sometimes of the cavities, sometimes anasarca. Indeed anasarca so frequently supervenes the termination of scarlatina, that it might be regarded almost as much a solution of the fever as desquamation of the cuticle. However, I cannot help looking upon this as very often the effect of improper remedies.

The treatment in all such cases should be decidedly antiphlogistic. The propriety of venesection will of course depend upon the general excitement and the local symptoms. Diaphoretics form

an essential part of the treatment when the excitement runs high. The bowels should be kept regular; but the less irritating or drastic the purgative, the better. If, as often happens, the urine coagulates at an early period of the fever, or that albumen exists in the urine in ever so minute quantity, it has appeared to me advisable to avoid mercury in every shape.

When anasarca supervenes the solution of the disease, diuretics are then necessary. If the urine be coagulable or contain albumen, we should avoid both squills and mercury, and, as a general principle, saline solutions. Not but that the anasarca swellings may often subside under such treatment; but they only give place to more formidable diseases — hydrocephalus, or inveterate muco-pulmonary discharges, frequently terminating in phthisis, in children; or ascites, tympany, or hydrothorax, in adults. At either age, the consequences may be diabetes, or some organic disease of the kidney or bladder. The diuretics which I have found most successful are digitalis and colchicum, but particularly the latter, which I think suited to serous urine in every instance, or whatever the nature of the disease. It does not appear that Dr. Christison used the colchicum in any of the cases of dropsy which he has published, as exemplifying that species arising from diseased kidney. Squill and mercury were used; but I should infer from the report itself that digitalis and supertartrate of potash seemed to agree best, and proved the most effectual remedies. If there be much fever venesection should be practised, and repeated until this is subdued. This, too, will be more especially necessary if the urine be high colored; and contain urea in abundance, with or without excess of lithic acid, or that it produce a speedy and sensible acid re-action on litmus. But if the urine be opalescent, contain little or no excess of urea, and have an alkaline re-action, then local bleeding, or if general bleeding be necessary, the bleeding should be small and repeated, will mostly suffice. With the diuretics, and in this case, colchicum is decidedly the best, tonics are extremely useful. In prescribing tonics we should recollect the distinction between tonics and stimulants: the latter are highly in-

jurious. Of tonics I know of none equal to the preparations of iron. Of these the phosphate, the tartrate, and the *tinctura ferri ammoniat*, appear to me superior to every other; and I question whether their efficacy be attributable to their tonic, so much as their restraining powers.

The mildest and most effectual preparation of colchicum, I conceive to be an acetic extract; and I am indebted to my friend Dr. Prout for first directing my attention to this preparation, which I believe to be peculiar to himself. I have, however, adopted a different mode of making the extract to Dr. Prout. He recommends evaporating the acetum colchici of the pharmacopœia to the consistence of an extract. I prepared an acetous infusion of colchicum by macerating the bruised seeds in distilled vinegar, filtering, and evaporating the filtered liquor to the consistence of an extract. I think thus prepared it is more uniform in strength, activity, and effect; and, what is perhaps of equal importance, does not produce those unpleasant effects which frequently result from the powder or other preparations.

These principles of practice will be found to apply to other diseases attended with serous urine as well as to dropsies. When the urine is alkaline, or shortly becomes so, then we may expect catarrhal or similar discharges from the bladder; of course I conclude the practitioner capable of determining whether the "phosphatic diathesis" prevail or not. In such cases we must carefully avoid the exhibition of alkalies and alkaline earths, or their salts prepared with a vegetable or destructible acid. These circumstances are not sufficiently attended to in practice. The phosphoric or muriatic acid in such cases is infinitely preferable. I prefer in most cases the former.

There is no subject, perhaps, of more importance than the state of the urine in diseases of the kidneys and bladder. The prescribing of alkalies and their carbonates in most descriptions of urinary irritation, has been productive, in many instances, of great mischief. This error has probably arisen from a too general interpretation of a passage in Dr. Marcet's work on calculous disorders*.

The common sedlitz powder is now so universally taken that to this circumstance alone may be fairly attributed much of the greater tendency to, and even prevalence of, vesical disease, at the present day. I know of nothing more calculated to induce disease of the bladder than an alkaline condition of the urine; and there is no more effectual means of inducing this condition than the practice now so common, of swallowing saline effervescing draughts in which the alkali is saturated with a vegetable acid. I know one case in which a man brought on a severe and long-continued catarrhal discharge from the bladder, attended with serous urine, by using carbonate of soda to render hard beer brisk and mild. In these cases the purest water, and free from all saline impregnations, is most desirable. If the use of distilled water could be adopted, it would be still preferable.

Opium, or some other narcotic, will, generally speaking, be necessary. The most effectual of this class, after opium, is the hop and hyoscyamus. They seem to exert a restraining effect upon the morbid secretions of the kidneys. I have long confined my practice to the acetate and sulphate of morphia in these cases. With these I generally give a proportion of extract of hyoscyamus, or of hop. The dose of morphia is from the one-twentieth to the one-tenth of a grain daily; and in these doses I have derived every advantage, without those vertiginous affections which are stated to result from larger doses. I have been now, for the last four or five years, in the habit of using morphia, and for the last three years to the almost total exclusion of opium; and except in two instances, one of which was not immediately under my care, but that of a friend, I cannot bring to my recollection any unpleasant consequence as resulting from it. But even in these cases the vertigo soon disappeared on discontinuing the medicine; but in one the return to its use was invariably attended with these effects*.

If the serous condition of the urine be well-marked, or of long standing, cupping the loins with the insertion of issues in the region of the kidneys, will prove highly beneficial. I have seen the quantity of albumen rapidly

* Second edit. pp. 173, 174.

* Hyoscyamus seemed to agree with this individual better than any other narcotic.

diminished, and in some cases even wholly disappear, after cupping and the insertion of issues. It will often happen that the albuminous condition of the urine, and the diseases associated with it, will, after the above discipline, yield to remedies which had been previously long tried in vain.

I had intended to illustrate the principles of pathology and therapeutics advocated in this paper by the history of a few select and appropriate cases. But these remarks have extended so much beyond the limits which I at first intended, that I shall be obliged to defer this history till a future opportunity. The principles, such as they are, are the result of patient and laborious inquiry, and for which ample opportunities have presented, in many instances, through the kindness of professional friends.

Chelmsford,
1st December, 1829.

COLLEGE OF SURGEONS.

[Communication of a "Professional Friend," concluded from our last No. page 369.]

HEN I am desirous to record the names of some of the surgeons composing the court of the college, who framed the regulations by which its business is transacted, and conducted its affairs since the attainment of the new charter, whilst their characters are still remembered by the profession; declaring, at the same time, my own conviction that abler men could not have been selected to decide upon the measures likely to conduce to the increase of the knowledge and respectability of our profession. The gentlemen to whom I particularly refer, were Mr. Chandler, of St. Thomas's Hospital; Mr. Keate, of St. George's (the uncle of the present surgeon); Sir Charles Blicke, and Mr. Long, of St. Bartholomew's; Sir William Blizard, of the London Hospital; Sir David Dundas, Mr. Cline, and Mr. Norris.

A committee of seven members held a great number of meetings for the consideration of the bye-laws. Their meetings often lasted from eight in the evening till two o'clock in the morning. Each regulation was deliberated on at three meetings, and the committee, convinced of the necessity of reflection and

repeated consideration, suggested that no alteration should be made in the laws without undergoing the same process.

The utmost frugality in the expenditure of the College is observable: indeed these gentlemen deemed the honor and gratification of directing the affairs of the college, so as to lead to results beneficial to the profession and the public, to be a sufficient recompense for all their labors. There is one most important point, in which I am convinced the council has conscientiously discharged its duties. It has selected, in conformity to its bye-laws, the best-informed and most respectable surgeons, according to their seniority, provided they have evinced a knowledge of anatomy and physiology, qualifying them critically to examine candidates in these initiatory and most important professional studies, or have attained great experience by superintending the practice of large hospitals. In making this selection, persons of respectable character and ability must necessarily be occasionally passed by, and they will consequently be dissatisfied with the conduct of the college. That the council may occasionally err in their selection, is not improbable; but their error is chiefly that of granting too free an admission.

It seems impossible to adopt better means of selecting from the profession persons best qualified to judge of the measures by which its prosperity is to be promoted. The electors and the elected are brought together from remote hospitals and parts of the metropolis with very little personal knowledge of each other, and with no community of interest or feeling except that resulting from the object of their convention, the endeavour to promote the prosperity of the profession. The election is decided by ballot, and the judgment of the majority must prevail.

The profession is possessed of a striking proof of the foregoing assertion, for two gentlemen, avowedly hostile to the measures of the college, have been of late elected members of the council. Each has proposed his own alteration of the regulations, and the council has met and deliberated upon them, and conceded to their opinions as far as the circumstances of the times permit; for the profession must be aware, that unless the legislature has decided whether and in what way it will accord to the

profession the means of obtaining anatomical knowledge till it shall become known where anatomy can be effectively taught, no regulations likely to be permanent can be made; and that the regulations of the college must always vary with the circumstances of the times.

It seems to be admitted that the council is chosen in the best way possible, were it merely for directing the general affairs of the profession; their competency, as examiners, alone is doubted. Now, though the young may think themselves better informed than those of more advanced age, it would be a waste of time to attempt to shew that the Court of Examiners is composed of men most capable of deciding upon practical points in our profession; and there is in general so many persons who have been teachers of anatomy and physiology included in their number, that it would be very unlikely ignorance in these elementary and highly important subjects should escape detection.

It is not my intention to represent the College of Surgeons as a perfect establishment, but it contains in itself the means of approximation to perfection; which it is probable will gradually be adopted. I merely wish the profession to consider what they would in reason desire. Would they wish to adopt the customs of other countries? If so, it will be found that the colleges of other countries appoint professors, to teach the different branches of medical science, and likewise examiners. The colleges here, too, might appoint some of their junior members, who have manifested a perfect knowledge of the latest additions and improvements made in anatomy, physiology, and those sciences which are the foundation of medical knowledge, to examine into the proficiency which candidates have made in them; whilst the seniors remain examiners on the practical points of the profession. If, also, certain members of the medical profession think that an especial examination in any one of its departments be essential to the public good (and I here refer to what has been of late said with regard to midwifery), it is in the power of the Colleges of Medicine and Surgery to appoint a committee of such persons as they know to be highly informed in the theory and practice of midwifery to examine such of their own members, or

other persons, as may be desirous of examination, and grant them testimonials of qualification. Under these circumstances, no alteration in the authorities for the regulation of the medical profession, already constituted and considered by the government and by the legislature, can reasonably be required.

The opinion of the medical profession must have great influence with respect to those subjects which they are supposed to have considered and to understand. It is therefore desirable that they should thoroughly consider what they wish to ask of parliament, with reference to the means of acquiring a knowledge of anatomy; without which their profession would be a curse instead of a blessing to society. At first, the members of the committee appointed by parliament to inquire into this subject, seemed to be clearly of opinion that no new law or positive enactment was requisite. It seemed only necessary to repeal the pains and penalties inflicted by some old laws upon those who had a dead body in their possession; laws which led to the severe sentences lately passed upon Mr. Cooke, of Exeter, and Mr. Gill, of Liverpool; laws which there is reason to believe that our ancestors made, not so much from dread of dissection as from that of sorcery.

As many paupers are supported during long illness and infirmity, and consequently may be said to die greatly in the public debt, it is not reasonable to expect that the additional and useless expense of burying their remains should be incurred, when, by making them subjects of anatomical instruction, the debt due to public benevolence would be amply repaid. It therefore only became necessary that parliament should enact that it shall be lawful for the directors of eleemosynary institutions to consign the bodies of such paupers as have no friends, in the first place, to the teachers of anatomy, and afterwards to those of the medical profession who may require them; upon condition of the receiver signing an obligation to keep the transaction from public knowledge, and so to dispose of the body as to give no offence or disquiet to any person who is not of the medical profession. By this mode of proceeding no feeling will be violated, and the disinterment of those bodies

which their relatives have piously consigned to the grave, will be no longer necessary or continued. Moreover, as there are persons who, by the commission of crime, have forfeited that respect and protection which the public extends to all its members, and who die in prisons, the legislature might further authorize the superintendants of these establishments to dispose of such bodies in a similar manner.

It can scarcely be supposed that parliament would appoint the public to be the distributors of the dead, and load their act with a cumbrous apparatus of irresponsible commissioners, were it not from the influence of the members of our profession, exerted directly or indirectly, from the supposition that they might possess an interest with the commissioners, and induce them to act in a manner contributory to their own private interests. In opposition to the simple permission given by such an act of parliament as I have supposed, for obtaining subjects for anatomical instruction, it is said that it denies to them the rites of Christian burial. The sacraments and ceremonies of the church are all designed for the benefit of the living. The pious committal of the relicts of our relatives to the grave, cannot but have a beneficial influence upon the survivors. The bodies for which we apply have no friends, and it would be superstitious in the extreme to suppose that "the bringing home of bell and burial" could be of any avail to the dead. Indeed the valueless nature of the dead body is strikingly exhibited by the words of the burial service: "We therefore commit the body to the ground; earth to earth, ashes to ashes, dust to dust."

Should, however, the legislature deem the burial of the remains of bodies received for dissection to be indispensable, the obligation signed by the receiver may be made to extend to the interment of them in consecrated ground. Moreover, should the legislature not be satisfied unless the distribution of friendless paupers and criminals was conducted by persons of responsibility, it appears best to entrust that responsibility to the Colleges of Physicians, or of Surgeons, in London, Edinburgh, and Dublin, and to agents of their appointment in the Provinces; for then, were any partiality shewn in the distribution, an appeal might be

readily made, and the error corrected. It seems impossible to conduct these transactions as in other countries, where bodies are brought to the schools and returned for burial with very little dissection, and sometimes merely with the performance of a single operation. I cannot believe that the medical profession intend to ask of the legislature of our own country that prodigality of supply which is granted by the police of other countries.

In opposition to the simply permissive act of parliament, which, I believe, was at one time contemplated, it is said that it would greatly distress the feelings of the friendless poor, whom necessity compelled to seek admission into our eleemosynary establishments: but abundance of facts contradict this supposition. In other countries, those admitted into hospitals know that their bodies will be dissected, and yet they do not hesitate to solicit admission. Even in this town, there is an hospital where the patients are fully apprised that such may be their lot; yet the applications for admission are as redundant as to any other hospital. The poor go into workhouses for a maintenance, and into hospitals for a cure. They think not of dying till the time arrives, and then, from failure of intellect, their thoughts are in general transitory, feeble, and unimpressive; or if otherwise, they seem quite indifferent about worldly concerns. As every one must know, that, after death, the body will be annulled by corruption, it cannot appear important whether it undergoes this change before or after dissection. There is reason to believe that few would object to be dissected, but from motives associated with their feelings during life. They do not choose that their persons should be exposed, or their diseases scrutinized, and perhaps made the subject of unfeeling remarks or communication. Such objections cannot apply to patients in poor-houses or hospitals. Those who may examine the body after death, have no personal knowledge of the party during life. They receive it as the remains of a fellow creature, who died of those diseases "which flesh is heir to."

LATIN EXAMINATIONS.

[By the subjoined letter, we perceive that our old friend at Monkbarns has become a member of our profession. We trust he will find it more profitable than looking for "relicts."]

To the Editor of the London Medical Gazette.

SIR,

I HAD not proceeded far with your leader of the 14th, when I doffed and wiped my Dollands to satisfy myself that our trusty courier, Jacob Caxon, had not put the Mechanics' Magazine, instead of the Medical Gazette, into my hands. A glance at your motto, "*licet omnibus*," speedily assured me that I was in possession of your valued hebdomadal, which has never failed since its introduction into this remote borough, to interest and instruct, by its varied and useful information, that portion of the community whose office it is to watch the first appearance and final exit of poor mortals. On the present occasion, however, the feelings with which I perused your remarks on "Latin Examinations," were not of that pleasurable kind which your judicious handling of medical politics and ethics was wont to inspire. I was determined, nevertheless, to hear you out; and it was with some consolation I found, what indeed I might have expected, that in wishing to abolish the practice of Latin examinations, you by no means desired to dispense with what has usually been deemed an essential pre-requisite to our professional education — *videlicet*, a competent acquaintance with classical literature. But, Mr. Editor, while I freely acquit you of all intention to obliterate or bring into contempt the little learning that still lingers among the followers of Esculapius, I cannot but opine that such is the *tendency* of the remarks in which your reasoning, on this subject, is conveyed. The zeal with which you have uniformly supported the dignity of our profession, and the authority so justly conceded to your opinions in matters involving its best interests, are but so many motives with me for examining the correctness of views which might, perchance, prove prejudicial, if not fatal, to its existence as a science.

The vivacity of your attack upon the

ancient usage in question, and the array of arguments, authorities, denunciations, and threats, with which it is supported, are, I must confess, rather daunting; but if I can turn your advanced position, I shall consider myself harmless both from your *railleurie* and that of Moliere, who, in his "*Malade imaginaire*," I humbly submit, had the medical charlatanry of the day in his view, as, in his *Tartuffe*, he scourged the dissemblers who dishonoured a sacred calling. I would therefore venture, at the risk of a bone bruising on your critical wheel, to defend what you are pleased to designate a worse than useless remnant of barbarism.

The great objection which you urge against the present practice of our universities is, that the extent of a candidate's acquirements is attempted to be ascertained in a language with which he cannot be supposed to be so familiar as his native tongue, and which, being a dead language, is insufficient, since science has become intricate and extensive, for the communication of our ideas. Could the charge of poverty thus brought against the Latin be established, I should be the last to wish to see perpetuated an usage which would inevitably retard the diffusion of knowledge. But is penury, indeed, among the defects of that language which served the masters of the world in promulgating their will to universal empire; which, "in the high and palmy state of Rome," was the language of common life, of polite society, of philosophy and the muses? Such *were* its powers and capabilities you will doubtless say, but it is now obsolete and dead. When we consider how much the English is indebted to the Latin for its elegance and flexibility, the "dead lion" might, methinks, have been spared this kick. Still no respect for prostrate greatness would induce me to compromise the interests of science by retaining a defective medium of communication, either out of gratitude for past services or veneration for dignified antiquity. But, admitting the gigantic strides which science has made in modern times, it will, I think, be difficult to shew that it has outstripped the power of the language of antiquity to record its progress and express its principles. Though, as a spoken language, the Latin is mute in our drawing-rooms, it is still capable of being made

the language of the academy; and though dead in one sense, does it not speak in those immortal works which survived the wreck of empires, and saved, through a long night of intellectual darkness, the most precious treasures of antiquity—its literature and science, with the taste for high attainments? Did it fail the great Bacon in pointing out the road to truth; or Newton and Galileo in recording their success in attaining it? And have we, from the days of Wolfbrand Oldenbuck, my respected ancestor till now, been wanting in proofs that it presents the scholar and philosopher with a pure and fitting vehicle for communicating the higher branches of knowledge? All this you will be ready to grant, but still ask, “why cramp ourselves with the fetters of a foreign and dead language when we can boast a vernacular tongue, at once the most rich, copious, and expressive perhaps in the world?” The answer I will give still in your own, on this occasion, most cogent and befitting words. “As a branch of general knowledge, and as the best basis for the superstructure of a complete medical education, we hold classical literature to be perfectly indispensable to the accomplished practitioner, both as a gentleman and a scholar. A familiarity with the classic writers will impart to his mind an elegance and elevation of sentiment—will improve his reasoning powers, and bestow on him a command of language scarcely attainable from any other source.” But what has this to do with the barbarous system of Latin examinations? Much, I think, Mr. Editor. The system which you so reprobate is in all our universities a main criterion of a candidate’s familiarity with the classics; and in some, and those not the least frequently called upon to confer medical degrees, the sole test of his having held that communion with the fathers which you regard as essential to his edification. Abrogate the usage in dispute, and one incitement to the study of classical literature is withdrawn. The competitors for the *summi honoris* will then come to the trial as “innocent of Latin” as the candidates for certificates from Apothecaries’ Hall. One of your intelligent contributors, Mr. Bacot, will perhaps inform you how much the youth of our profession were disposed, when no obligation existed, to study the language of Celsus for its own sake. If,

in order to get rid of examinations in a dead language, and yet ensure the requisite modicum of classical erudition, you would insist on a previous course of the “humanities,” you must first succeed in moving the senatus to a revision and reconstruction of their statutes, which might not be an easy task. To take a lesson from the practice of “the worshipful” would, I fear, little mend matters, it being as easy to produce an interlinear translation of Gregory and Celsus as of the London Pharmacopœia.

I consider it no objection to the retention of examinations in Latin, that many who undergo them fail in exhibiting that perfect acquaintance with the language which you admit to be desirable. The same individuals would probably make but a sorry display in their mother tongue. Were the objection worth any thing, I see no reason why Oxford and Cambridge should not be razed to the ground, because a great majority of those who resort to them leave within their halls the little learning they carried there from school.

To expect perfection in human institutions would be as unreasonable as chimerical. Our profession, like every other, admits of improvement, and, perhaps, reform. It has often been taunted with attempting to veil its doctrines in mystery, and impose upon the vulgar, great and small, by forms and ceremonies. The works which have in every age been published to the world to explain, though not always satisfactorily, its principles and practice, might, I conceive, have saved it from this reproach. While we take care that no just grounds shall exist for such imputations, nor any fitting opportunity be lost for judiciously correcting its defects, let us not, in our eagerness to improve its condition, dismantle it of those becoming ornaments which add to its dignity and strength. To “the lowest classes of society,” whose suffrages you invoke in aid of your hostility to ancient usages, I am willing to allow due credit for shrewdness and intelligence in the affairs of life without making them arbiters in science: their importunate “*cui bono*,” selfish, gross, and earthy, was never yet the rallying cry of true philosophy. The enlightened and refined alone can properly appreciate the connexion between ornament and utility. Let us, therefore, fervently depre-

cate, as the worst of evils, any measure which might tend to disunite them in our profession. "The feather that adorns the royal bird sustains his flight; strip him of his plumage, and you fix him to the earth."

Thine,
JONATHAN OLDBUCK, M.D.

Monkbarns,
Frid. Kal. Decemb.
MDCCCXXIX.

MEDICAL GAZETTE.

Saturday, Dec. 26, 1829.

"Licet omnibus, licet etiam mihi, dignitatem *Ar-
tis Medicæ* tueri; potestas modo venendi in pub-
licum sit, dicendi periculum non recuso."—CICERO.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

WE publish this week, in another part of the Gazette, the latest regulations of the Irish College, but we regret that our space will not at present permit us to offer more than a few brief remarks on them. An opportunity, however, may speedily arrive, when we shall take a comprehensive view of the state of professional education in the sister kingdom; a glance, such as we conceive will not be uncalled for, inasmuch as it would seem that considerable darkness prevails on this side the channel, with respect to the state of the profession in Ireland. It may be generally known, perhaps, that the College of Surgeons enjoys, by charter, the privilege of arranging what education a candidate must receive, and what qualifications will entitle him to a diploma. But we suspect that it is not generally known in this country, that the said College, unlike that in London, professes to be the fountain head of surgical and (as it would now appear) of *medical* instruction also: in fact, that the chief school of surgery in Ire-

land *belongs to the College*, and that its conductors, its partners in trade, and the leading men of the Council, are identical.

Our readers may also remember, that some time ago there was a loud and general outcry against the College, on the subject of apprenticeships: no gentleman could by any means obtain the sanction of letters testimonial, who had not served an apprenticeship to a *regularly educated surgeon* (a term by which the members of the College modestly understood themselves exclusively to be designated); in a word, that an apprenticeship was the only door by which admittance into the surgical profession could be obtained. Well, then, the outcry against this abuse proved too strong for them—it was triumphant. A new charter has since been conferred; the College has been "thrown open," as it is called, and apprenticeships are no longer indispensable; at least, such was the ostensible and generally accepted tenor of that document. Now let us see what the first authenticated manifesto of the Council puts forth; and if it appear, that, with professions of liberality, they have adopted a happy contrivance to keep their doors shut—and by such a distribution of the requisites for each class of candidates, to turn the balance visibly in favor of the *old regime*—must it not be inferred that the whole proceeding of getting a new charter was a mere mockery—a dextrous means of evading the just demands of the public?

Candidates for the license must be either registered apprentices or independent students. We will contrast a few of the documents required from each.

Apprentice.

Indenture of five years' apprenticeship.
Thirty guineas.
Certificates of attendance on hospitals, lectures, dissections, &c. for a time not specified.

Non-Apprentice.

Certificates of six years' study.

Sixty guineas.

Certificates of three years, or five winters' hospital attendance, three courses of anatomy and physiology, three of surgery, three of dissections and demonstrations, two of chemistry, one of materia medica, one of practice of medicine, one of midwifery, and one of medical jurisprudence.

Can there be a moment's hesitation on which side the advantages lie, and that these enactments are calculated to perpetuate the vile system of apprenticeships? An indenture for five years is set off against *six years' study*; and an attendance on hospitals and lectures for a period which has been left in a most convenient obscurity, against an active and expensive course for a carefully defined space of time. What would be thought of such a monstrous regulation had it emanated from Lincoln's-Inn Fields?

To the course of education itself we can have no objection—though we fancy the pilots are putting to sea with engines at work, under a high and dangerous pressure; let them add botany, natural history, and all the other physical sciences, to their list; let them even profess themselves to be regular physicians as well as regularly educated surgeons; let them, in fact, indulge their spirit of improvement to the utmost, (though, by the way, surgery has never yet been separated from the barber craft in Ireland), yet it is to us, we must confess, not a little extraordinary that in their ardor they by no means despise the system of perpetuating servitude by the continuance of apprenticeships. There must be something extremely seductive and satisfactory in it to reconcile them to the palpable and notorious degradation of entering their profession as they should a mechanic trade. Nay, we are aware

that there is a tempting bonus held out for the encouragement of the system; so much so that we must say, had we a young friend about to enter upon his surgical courses in Ireland, we should by all means recommend him to be bound to a master.

But we have done for the present. We shall only add that our curiosity has been excited not a little by the mysterious inuendo in the first regulation, which alludes to certain "privileges reserved for apprentices." That the fees for hospitals, lectures, dissections, &c. demanded of registered pupils are on a diminished scale, we know; and that the whole of the qualifications for letters testimonial are suited to the convenience of both master and apprentice, is manifestly clear; but what those other "privileges," reserved for apprentices, are, we can only guess. We shall not, however, venture to publish our conjectures until we have obtained some more particular information. When we shall have attentively studied the by-laws of the college at large, we will resume the consideration of the subject.

Extract from the By-Laws of the College, relating to the Examination of Candidates for Letters Testimonial; published by order of the Court of Censors.

I. CANDIDATES shall be admitted to an examination for letters testimonial as apprentices, and shall be entitled to the privileges reserved for apprentices, if they shall have been duly registered as such on the College books.

II. Every apprentice so registered shall be admitted to an examination for letters testimonial, if he shall have laid before the Court of Censors the following documents:

1. A certificate signed by the President, or Vice-President, and two of the Censors, that he has passed an examination as to his acquaintance with the Greek and Latin languages in the following books,—viz. the works of Sallust, the first six books of the *Æneid* of Virgil, the Satires and Epistles of Horace, the Greek Testament, the Dialogues of Lucian selected by Walker, and the first four books of Homer's *Iliad*; or a certificate from his tutor that he has entered as a student Trinity College.

2. His indenture of apprenticeship, with a certificate signed by the member or licentiate to whom he has been indentured, that he has fully and perfectly served such apprenticeship for the full term of five years.

3. A receipt shewing that he has lodged, to the credit of the President, and for the use of the College, in the Bank of Ireland, the sum of thirty guineas.

4. Certificates of attendance on hospital practice, on lectures on anatomy and physiology, surgery, the practice of medicine, chemistry, materia medica, midwifery, and medical jurisprudence; and of the performance of dissections, and attendance on anatomical demonstrations.

5. A thesis, essay, or dissertation in Latin or English, fairly engrossed according to a prescribed form, upon any of the following subjects:—Anatomy, physiology, surgery, practice of medicine, chemistry, materia medica, midwifery, or medical jurisprudence; or, in place of such dissertation, a series of cases collected in the hospital in which the candidate has attended, illustrated by comments, or observations.

III. Every candidate who has not served an apprenticeship shall be admitted to an examination for letters testimonial, if he shall have attended lectures, or hospitals, for three winter seasons at least, in Dublin, London, Glasgow, or Edinburgh; and if he shall have laid before the Court of Censors the following documents:—

1. A certificate signed by the President, or Vice-President, and two at least of the Censors, that he has passed the examination as to his proficiency in the Greek and Latin languages, as prescribed for the registered apprentices: or a certificate from his tutor that he has entered Trinity College.

2. A receipt shewing that he has lodged, to the credit of the President, and for the use of the College, in the bank of Ireland, the sum of sixty guineas.

3. Certificates shewing that he has been engaged in the study of his profession, in some hospital, or school of surgery, or medicine, for the full term of six years.

4. Certificates of attendance on a surgical hospital, containing at least 50 patients, during five winter seasons of six months, or three years, if such attendance shall not have been perfected during the winter seasons.

5. Certificates of attendance on three courses of lectures on anatomy and physiology, three courses of lectures on the theory and practice of surgery, and the performance of three courses of dissections, accompanied by demon-

strations; also certificates of attendance on two courses of lectures on chemistry, one course of lectures on materia medica, one course of lectures on the practice of medicine, one course of lectures on midwifery, and one course of lectures on medical jurisprudence.

6. A thesis, or series of cases, as enjoined for registered pupils.

IV. No certificate shall be received for attendance on lectures, delivered in Ireland, unless from teachers in schools permitting the visitation of the Court of Censors, and receiving their sanction.

V. No certificates shall be received from teachers who deliver lectures upon more than one distinct subject, as hitherto allotted to professors in colleges and universities. This regulation, however, shall not exclude the certificates of a teacher who delivers separate, perfect, and distinct courses on anatomy and physiology, and on the theory and practice of surgery.

VI. No certificate shall be received for attendance on lectures on anatomy and physiology, unless such lectures shall have been delivered upon at least five days in each week of the winter session, between the 1st of October and 1st of May; nor on the theory and practice of surgery, on chemistry, practice of medicine, materia medica, or midwifery, unless delivered within the same period, or at least three days in each week. The two courses delivered in London, and there called autumn and spring courses, shall, however, be considered equivalent to one winter course of six months, as delivered in Dublin and elsewhere.

VII. Every candidate producing certificates of attendance on lectures, or hospitals, previous to his examination for letters testimonial, shall be liable to be examined respecting their authenticity; and if he shall refuse to answer thereupon, or if it shall appear from his answers, or from any other information obtained by the Court of Censors, that he has not attended such hospital or lectures with regularity, or according to the regulations laid down by the College, he shall not be admitted to an examination for one year; or should it be proved that he has presented a forged certificate, or a certificate obtained by causing some person to personate him and attend for him, he shall never be examined; and if such fraud shall be discovered after the candidate shall have obtained letters testimonial, he shall be expelled, and such letters shall be withdrawn, and shall be given up by him to the College, on demand in writing signed by the Secretary, or, in default thereof, proceedings shall be had against him on his bond.

VIII. The examination of every candidate for letters testimonial shall be held in the presence of the members and licentiates of the College, or such of them as choose to

attend; and the Secretary shall, by regular summonses, give at least four days' notice of such examination.

IX. Every candidate for letters testimonial shall be solemnly examined on two several days, in anatomy and physiology, in the theory and practice of surgery and medicine, in chemistry, and in materia medica. Candidates shall be expected to perform such surgical operations, or make such dissections on the dead body, as the Court of Censors may require; or they shall be called upon to explain any anatomical preparation which the examiners may lay before them.

X. In case a candidate shall be rejected, and shall appeal to the Court of Assistants, such appeal, stating that he considers himself aggrieved by the decision of the Court of Censors, shall be lodged within eight days from the date of rejection, and the candidate shall be admitted to examination within fourteen days from the date of such rejection. The examination before the Court of Assistants shall be conducted, in every respect, as the examination before the Court of Censors.

XI. A candidate for letters testimonial who has been rejected, shall not be admitted to another examination, except upon his appeal, in a less time than one year from such rejection; and he shall then be required to lay before the Court satisfactory evidence of his attention and opportunities of improvement, subsequent to the period of his rejection.

XII. The Court of Censors shall be authorized to examine candidates for letters testimonial, who have not been educated in strict conformity with the above by-laws, but who shall produce evidence of having received a professional education equivalent to that required by the College; provided such candidates apply for an examination, and lodge their certificates and other necessary documents with the Secretary, previous to the 1st of May, 1830. The Court shall also be authorized to receive certificates issued by competent teachers previous to the 1st of May, 1829, notwithstanding any regulation to the contrary in the above by-laws.

Midwifery Diploma.

XIII. The mark distinguishing practitioners in midwifery in the printed lists of the College, shall not be affixed to the name of any member or licentiate of the College subsequent to the 1st of November, 1829, unless he shall have obtained the license or diploma of the College, authorizing him to practise that branch of surgery as herein after specified.

XIV. A Court of Examiners, consisting of a chairman, deputy chairman, and six members, shall be elected by ballot, on the first Monday in January in each year, to examine such members or licentiates as be-

come candidates for the diploma in midwifery; any four of which court, with the chairman or deputy chairman, shall be competent to hold such examination.

XV. Every candidate for the diploma in midwifery shall be admitted to an examination, if he shall have laid before the Court the following documents:—

1. A receipt shewing that he has lodged, to the credit of the President and for the use of the College, in the bank of Ireland, the sum of five guineas.
2. Certificates of attendance on two courses of lectures on midwifery, of six months duration each.
3. A certificate of attendance on an established lying in hospital for a period of at least six months, or a certificate that he has been a resident pupil for six months in some established dispensary for lying-in women, and diseases of women and children; such hospital or dispensary to be approved of and sanctioned by the Court.
4. Satisfactory evidence that he has conducted thirty labour cases at least.

XVI. Candidates for the midwifery diploma, shall be examined on the anatomy and physiology of the female generative system, the theory and practice of midwifery, and on the diseases of women and children; and if approved of by the Court, shall receive a license or diploma to that effect, to which the College seal shall be affixed. Should a candidate be rejected, he shall not be admitted again to an examination until a period of three months shall have elapsed, and he shall then be obliged to produce satisfactory evidence of his having been engaged in the study of this branch of surgery subsequent to such rejection.

WM. AUCHINLECK, President.

October 23, 1829.

LEGAL MEDICINE.

A CASE has recently occurred in France in which a body was disinterred *seven years after burial*, and the fact of the individual having been *poisoned by arsenic* determined by chemical examination.

M. Orfila was asked, last June, if a body, removed from the grave after such a lapse of time, could possibly afford proofs of poison having been administered; and if so, in what manner such an investigation was to be conducted? To this question he replied, that it was very probable the body was already almost entirely reduced to ashes, but that, nevertheless, if a sort of blackish coom was found at the sides of

the spinal column, chiefly in the dorsal and lumbar regions, such mass might be analysed in the manner pointed out in his work on Toxicology. MM. Ozanam and Ide, physicians at Lyons, where the supposed murder had occurred, were requested by the legal authorities to proceed to the disinterment of the body of a man whom they suspected had been poisoned by his daughter in 1822, in the department of Ain. They accordingly did so, and found that nitrate of potass and hydro-sulphuric acid were acted upon by the suspected matters as by arsenic. The grave had been dug in a dry gravelly soil, in which there was a little sulphate of lime; and to this circumstance must doubtless be attributed the remarkable state of preservation in which the body was found. The coffin was entire, formed of thick planks of fir, which internally were quite dry. Although more than seven years had elapsed since the interment, the body was recognized by the priest, by the grave-digger, and even by some of the national guard who had assisted at the ceremony, and fired over the grave. All remembered the spot, and the individual was identified by the hair which yet remained, and by the teeth, all of which were still in their sockets, except one particular tooth, which he had lost before death; and lastly, the joiner recognized the coffin, which had been constructed with unusual care, being intended for a person of distinction. The head, trunk, and limbs, were entire, so that the stature could be measured. The chest had sunk in, the heart and lungs were blended together, and presented the appearance of a dark ointment. The whole was without smell. The entire trunk was removed, the head and extremities being regarded as unnecessary to the investigation. The portion thus reserved for examination weighed nine pounds; of this, two pounds were set aside for a second series of experiments, in case those made on the first should prove unsatisfactory.

In these investigations, MM. Ozanam and Ide went on the supposition of arsenic being the poison—this being the one employed in the great majority of cases. The matters above-mentioned were boiled, the fluid evaporated to dryness; and the residuum thus obtained dissolved in distilled water. This produced a deep-coloured liquid, which

was but imperfectly deprived of its hue by chlorine. The distilled water charged with this extract was again evaporated to dryness. At the same time, four ounces of nitrate of potass, placed in a matrass, were exposed on ignited charcoal. The suspected matter, well dried and rolled into little portions, was introduced. Each time this was done, a deflagration was perceived. It was then allowed to cool, and the residue again dissolved in distilled water. This solution was saturated with nitric acid, and afterwards subjected to the usual re-agents, all of which indicated the presence of arsenic. Some small portions were treated with vegetable charcoal, introduced into a glass tube, and then heated. They gave out aqueous vapour; soon after which, small grey-coloured and brilliant points were seen. A grain of metallic arsenic was thus obtained. Another portion, treated with hydro-sulphuric acid; furnished sulphuret of arsenic; and this, heated and acted upon by caustic potass, afforded a portion of shining matter, which was easily dissolved in distilled water, by directing upon it a current of oxygen gas. By these various experiments, the fact of a considerable quantity of arsenic having been administered was thus demonstrated at the end of seven years, affording a striking illustration of the importance of toxicology in forwarding the ends of justice.

HOSPITAL REPORTS.

HOTEL DIEU.

Anomalous Exanthematous Eruption on the Neck and Lips—Death—Blood in the Lymphatics.

A MAN, aged 36, of middle size, and rather robust, experienced for some days general indisposition, with considerable prostration of strength, without any apparent cause. He next perceived that the upper part of the neck, on the right side, became swollen, and covered with phlyctinæ, over a space equal in size to that of a five-franc piece. In the centre of this spot the epidermis was raised, and discovered the dermis, which was of a brown colour. At the same time the lips swelled, and became

covered with minute miliary vesicles. There was anorexia, fever, and oppression: the patient seemed to have the commencement of a severe attack of erysipelas, or even of malignant pustule. However, the general symptoms as yet indicated nothing alarming. The patient was ordered to be watched, while simple beverages and attention to diet were enjoined. He died the same evening, without having presented any other symptom.

Examination.—The cellular tissue beneath the exanthematous patch on the neck was ecchymosed, but no other change was perceptible at this part. The stomach had elevated patches scattered over it, similar to those which are met with about the ileo-cæcal valve. The rest of the alimentary canal was free from disease. The body was sent to La Pitié for dissection, where some pupils having removed the abdominal viscera, were proceeding to study the muscles of the loins and pelvis. In raising the peritoneum which covered the lower part of the spine, they found on the last lumbar vertebrae, and in the hollow of the sacrum, a set of vessels highly injected, and of a deep red color. Their disposition, numerous anastomoses, and connexion with the lymphatic ganglia, left no doubt of their nature, and it was perceived that all this system of vessels was filled with blood. Whence came this liquid, or how had it found its way into an order of vessels which does not naturally admit it? None of the neighbouring organs had been the seat of hæmorrhage; neither veins nor arteries were altered; in a word, there was nothing to explain the phenomenon. These lymphatics were traced upwards with great facility, into the thoracic duct, which was injected in the same manner, even till its junction with the subclavian vein, which was in its natural state. The liquid from the lymphatics was analysed by M. Barruel, and ascertained to be really blood; and a drawing was made from the preparation by Dr. Carswell, so as to preserve the appearances.

Changes in the lymphatic system become less rare, in proportion as investigations relating to it multiply. Besides the facts recorded by M. Andral, others have been collected in England and Germany, which prove that the thoracic duct is susceptible of alterations no less severe than numerous: it has been found filled with pus, with softened

medullary degeneration, &c.; obliterations of the duct have been noticed; partial dilatations and strictures, or narrowings, of a greater or less extent; its parietes have been found ulcerated; thickened, and altered in various other ways. But the particular pathological fact which we have above related, is regarded by MM. Dupuytren, Breschet, and Sanson, as unique.—*Lancette Française*.

MEATH HOSPITAL, DUBLIN.

Case of Tracheotomy in the Cynanche Laryngia.

SATURDAY, Nov. 28, 1829.—Miles Brady, æt. 24, a labourer, admitted into the hospital, under the care of Mr. Porter, with the following symptoms.

Great dyspnoea, the respiration having a sibilous or whistling sound, accompanied by severe exacerbations, particularly at night. Harsh ringing cough; almost total loss of voice, the trachea moving upwards and downwards in the neck, and the muscles acting with almost convulsive energy and rapidity. Great tenderness on pressing the neighbourhood of the larynx. On examining the fauces no appearance whatever of inflammation. The face is flushed and swollen; the lips have a tinge of lividity; the eyes white and prominent; there is an indescribable expression of anxiety in the countenance; pulse 100, small and weak.

Such were the symptoms observed at 10 A.M., the time of the patient's admission, when he was ordered to have a bolus, containing ten grains of calomel, every third hour, and to be bled immediately until syncope should supervene.

At 2 o'clock Mr. Porter saw the patient again, and found the symptoms aggravated to such a degree that life could not continue many hours. The cough incessant; and the respiration so impeded that it could be heard in another ward, at the distance of several yards from the patient's bed. The operation was determined on instantly, and only a sufficient time allowed to summon the assistance of the other surgeons of the hospital.

At half-past 3 the patient's bed was wheeled into the operating theatre, and placed in such a position as to throw the light on the neck. An incision was made, commencing near the sternum, and carried upwards to the cricoid cartilage, exactly in the central line of the neck. This was carried deeper between the muscles, and then a particular difficulty in this operation occurred. The blood, mixed with air, bubbled and gurgled from the bottom of the wound; and it was evident that the deep parts of the neck were emphysematous. On proceeding deeper still, the difficulties increased. Persons who form their ideas of

this operation from books, or even from dissection on the dead subject, will scarcely conceive the depth of wound often necessary in the living. In this instance the knife had penetrated to the depth of two inches ere the trachea was laid bare, and then it was almost impossible to fix this tube so as to permit the excision of a portion of it. After some time a semilunar incision was made in the windpipe, and a tube passed through it.

The patient did not seem to experience the instantaneous relief that has been described as occurring after the operation. On the contrary, the irritation produced by the presence of the tube, and perhaps by the trickling of some blood into the trachea, continued for a considerable time; and it was only after the lapse of an hour and a half that he felt relief, and enjoyed a composed and tranquil sleep.

Nov. 29th.—Patient expectorates a good deal of mucus through the wound. Pulse above 100.

Venæsection, and to continue the calomel in ten grain doses, as already ordered.

Nov. 30th.—Pulse 105, and soft; mouth slightly affected by the mercury. Respiration slightly impeded by the inspissated mucus in the wound; great emphysema of the neck, extending below the clavicles. The stethoscope indicates intense bronchitis over the entire lungs.

Venæsection to sixteen ounces. Pills of Calomel and Antimonial Powder every fourth hour.

Dec. 1.—Was bled a second time last night, and slept afterwards for six hours. Face, to-day, flushed and anxious; complains of pain in swallowing, and very considerable uneasiness in the throat.

Bled to-day again. The blood is cupped and buffed. A small portion of the trachea, which was loose and coated, like a valve, was removed this evening.

Dec. 2.—Patient has had little sleep, but yet is better. He lies quite tranquil; breathes freely through the wound, and gives but little trouble. Expression of countenance improved; complexion of a bright florid red; emphysema as before; bronchitis diminished.

Medicine to be continued.

Dec. 3.—Patient's mouth much affected by the mercury. He makes signs that he can swallow without much difficulty. Pulse 84, and soft; stethoscope indicates that there is no bronchitis; emphysema as extensive as ever.

Venæsection, and the medicines to be continued.

Dec. 4.—Mouth does not appear to be so sore as yesterday. Pulse 84; slight bronchitis; emphysema diminished. On closing the wound for a moment, the difficulty of

breathing does not seem to be in the slightest degree relieved.

Bled to twelve ounces; blood deeply buffed. Calomel and opium every third hour.

Dec. 8.—The symptoms during the last three days have been nearly stationary. On this day the salivation is very great; and on closing the wound the patient speaks with a very raucal tone. The respiration not relieved; an abominably fetid odour from the wound; occasional spasmodic dyspnoea, with paroxysms of coughing. Expectoration from the wound abundant, not puriform.

The mercury is discontinued.

Mr. Porter was this day understood to say that he did not anticipate the best results in the termination of this case; but whatever these results may be, shall be made known to the readers of the Medical Gazette.

WESTMINSTER HOSPITAL.

Erysipelas.

JAS. BURGESS, æt. 49, admitted Nov. 30, under Mr. White. Ten days ago he first perceived a small puffy sort of lump on the back of the forearm; he is quite unconscious of ever having received any injury on that part. It increased in size a little, and was very painful on the third day after he first perceived it. On the fourth day his whole arm was inflamed and swelled; he had medical assistance, when it was fomented and poulticed, and he was ordered half an ounce of salts every night. It still continued growing worse, and when he was taken in, the whole arm was swelled to nearly double the size of the other; the skin red, hot, and tense, more especially on the forearm, immediately below the olecranon.

He says he has always lived remarkably regularly. He is a labouring man. His health has not been good for many years, having had frequent attacks of illness. He had not been drinking or committing any excesses to which he can attribute his present attack.

R Infus. Sennæ, ℥viii.

Pulv. Jalapæ, ʒij.

Magn. Sulph. ʒss.

Potassæ Supertart. ʒij.

Sodæ Carb. ʒj.

M. ft. mist. p̄ cap. coch. ij. 4tis horis.

Dec. 1st.—The tenseness and inflammation of the arm is in some degree relieved. Bowels have been very freely purged, and there is a small opening in the upper part of the arm, which discharges a little. Tongue clean. Pulse quick and feeble.

2d.—Mr. Harding made an opening to

day in the under part of the arm below the elbow, and a small quantity of purulent matter escaped. On passing the finger into the opening, the integuments were found separated, for two or three inches round. Poul-tice to be applied at night, and fomentations continued during the day. Continue mixture thrice a-day.

3d.—The wound has discharged very copiously, and is much less hot and inflamed. Tongue clean, bowels open, appetite moderate.

7th.—The inflammation and swelling of the arm have nearly subsided.

10th.—The arm is now very quiet, and he does not suffer much pain from it. There is a great discharge, and he feels extremely weak. Tongue tolerably clean; bowels open; pulse 70 in the minute, wiry and jerking.

R Quinin. Sulph. gr. xvj.

Acid. Sulph. d. 3j.

Infus. Rosæ, ʒviij.

Ft. mist. coch. ter in die sumend.

Full diet, and a pint of porter daily. Appetite is tolerably good.

14th.—The quantity of discharge is diminished; his appetite is good, and he is rapidly regaining his strength. The opening is filling up with granulations; and all inflammation has entirely disappeared.

Wax as an application to Ulcers.

The application of wax to old ulcerated legs has been practised here with great success within the last few months. In every instance it has rapidly improved the character of the sore, and brought on a disposition to skin over, and in the greater number of cases the ulcers have healed in a much shorter time than could have been calculated with the ordinary application—indeed it has succeeded often when all the usual dressings had been tried, and failed. The following is one out of many, where its beneficial results have been experienced.

Samuel Buxton, æt. 35, admitted Oct. 28, 1829, under Mr. Lynn, with a large irregular ulcer, about six inches in length, and from three to four in breadth, extending down by the side of the shin, with excavated edges, and dark unhealthy-looking granulation. States that for the last two years he has been a labourer, but was previously in the army, and served in India for four years, during which period he lived a most irregular life, drinking spirits whenever he could get them; sleeping in the open air, frequently on marshy ground. He had an attack of ague three years ago, and has been subject to it ever since. About two years back he was invalided, and sent to England, and on his passage, during one of the paroxysms, he states that a sore on his leg broke out, where there had been one some time before, occasioned by grazing it against an iron bedstead. He was confined four months to his bed, during which time two pieces of bone

came away. On his arriving in England, he was sent to Chatham, from whence he was discharged cured.

Several months ago several small ulcers appeared, which gradually increasing, became one continuous sore. It was poulticed with linseed meal for a fortnight before he came in, and he had taken some aperient medicine.

Oct. 29th.—He is an unhealthy-looking man, emaciated, and says he suffers much from his leg, which is very painful. A poultice was applied on his admission, and a dose of house medicine given him. This morning the ulcer has been coated with wax, and the following mixture ordered:—

R Infus. Gent. C. ʒviij.

Acid. Sulph. d. 3ij. M. ft. mist. et cap.

Coch. ij. ter in die.

31st.—The character of the sore is much improved, the granulations have a more florid and healthy appearance, and the edges are less excavated. Repeat the wax.

Nov. 2d.—The hollowed edges are now completely filled, and skin has formed round them.

4th.—On removing the wax this morning, the granulations, though extremely healthy, were found to be very high; the most elevated portions, therefore, were rubbed over with the argentum nitratum, and the wax applied again.

6th.—The granulations are nearly level now, and skin forms rapidly round the edges.

10th.—His health is still not good. Appetite bad, and he is much troubled with a cough.

R Pil. Plummeri, gr. v. alt. n. sumend.

15th.—His general health is improved, and his cough is less troublesome. The ulcer is skinning over rapidly.

Dec. 10th.—The leg has been dressed regularly with the wax, and has continued gradually but steadily improving. There is now merely a small ulcer of very healthy character, about an inch in length, and which is evidently healing very rapidly.

GUY'S HOSPITAL.

Fractures of the Leg.

We present the following cases of fracture of the leg to our readers, in illustration of the good effects of the straight position, with a splint on the inner side of the leg, as practised in France by M. Dupuytren, when compared with the plan recommended by Pott and others, and generally adopted in this country, viz. to keep the leg semiflexed on its outer side.

CASE I.—While J. M. æt. 30, was walking over Westminster bridge, with his cart and horses, he slipped from the high pavement, and fell, his right foot turning inwards under him, so as to produce a frac-

ture of the fibula, about an inch above the point of the outer malleolus, through the tibio-fibular joint, and one of the inner malleolus, from above to below and outwards, extending into the ankle joint. The inner malleolus, thus split off, was separated from the shaft of the bone, by the effusion into the joint consequent to the contusion.

When admitted, immediately after the accident, on Sept. 21, under Mr. Key, the nature of the injury was apparent; but there was so much tumefaction, that leeches were applied before putting the limb in splints. His leg was maintained in the straight position, on pillows, for a few days. The leech-bites ulcerated, requiring the use of poultices, and rendering the subsequent application of the bandages rather inconvenient. These were applied on Oct. 1—a splint extended from the knee to the inner ankle, padded thickly to about half way down the leg, so as to press on the upper-part of the tibia alone, and a small pad pressed the inner malleolus outwards; next a long splint reached from the back of the thigh to the heel, having a foot-piece attached, and well padded; including these a roller was applied over the foot and ankle, in the figure of 8 mode; and another fixed the apparatus at the knee, beginning two-thirds up the leg.

No bad symptom followed.

On the 15th October he could bear the leg to be handled without inconvenience, and could move his ankle without pain, indicating pretty firm cohesion of the fractured bones. Four days afterwards all splints were removed, and the limb merely bandaged.

On Oct. 29, five weeks and a half after the reception of the injury, he left the hospital with a very straight leg, the ankle-joint being only stiff in some degree.

CASE II.—J. T. a stout healthy-looking man, fell on Thursday evening, Oct. 29, over some bricks, by which his foot was bent under him inwards. On the following morning he came to the hospital, with his leg greatly swelled and hot. A fracture of the fibula, about three inches above its point, and one of the tibia, separating, but not displacing the inner malleolus from the tibia, were discovered.

App Hirud. xx. cruri, et postquam foveatur, adhibeatur constanter, Lotio Plumbi diluta frigida. Cap. Col. c. Cal gr. xv.

On Nov. 11, after the repeated application of leeches, the tumefaction was sufficiently subdued to allow the application of splints. As in the above case, a splint was put on the inner side of the leg, but with a foot-piece in addition, so that slight inversion of the foot was allowed, and the roller was applied so as just to catch the point of the outer malleolus, and counteract the muscles, which drew the fractured extremities towards the tibia.

On Nov. 30 his leg was quite straight, and

the bones very firm, permitting motion of the foot in all directions without pain.

On Dec. 7 he was discharged from the hospital quite well, all splints having been removed for two or three days.

CASE III —This was a compound fracture of both bones, produced by a piece of timber falling on the leg of T. W. æt. 11. The tibia and fibula projected in front, each by a separate wound, at about two inches and a half above the ankle. The foot and ankle were greatly arched inwards, requiring a splint reaching from the knee to the foot on the outer side, to obviate this, and which kept the leg in a good line. The wounds were poulticed for some days, and on the 15th one was quite healed, and the other nearly so. Soon after this, however, acute erysipelas attacked the leg, which excited fear for the ultimate result, and retarded the progress of the cure in a great degree. Matter formed in the neighbourhood of the wound, and the boy became so restless as to render the splints, applied loosely on account of the erysipelatous inflammation, of little advantage.

On Nov. 23 the sores were nearly healed, and the bones quite united and firm; but there was a very small sinuous communication with the lower portion of bone, which was denuded of its periosteum.

On the 25th the sores were healed, the bones firmly united, and the limb admirably straight. Pasteboard splints now superseded the others, and he was allowed to get up.

In five more days, or exactly ten weeks and a half after the time of the accident, the boy left the hospital quite well.

CHALLENGE.

LAST Tuesday evening, Mr. M'Christie, a reporter in the hire of the Lancet, whose name has recently appeared in our pages in connexion with Mr Earle's correspondence with Wakley, sent Mr. Mills—we presume the printer of the Lancet—to require an explanation from Dr. Macleod, as reputed Editor of the Medical Gazette, of certain charges of falsehood against Mr. M'Christie, made, as we stated, on the written authority of Mr. Earle. As our readers may suppose, the right of Mr. M'Christie, or any other hireling of the Lancet, to claim the privileges of a gentleman, was treated with contempt.

W. WILSON, Printer, 57, Skinner-Street, London.

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SATURDAY, JANUARY 2, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XIV.

Ulceration and Granulation.

THE matter of an abscess, gentlemen, advances to the surface of the body, or it escapes from those internal cavities which have external outlets—such as those of the digestive, the respiratory, the urinary, or generative organs—in consequence of a removal of the intervening substance by the absorbents. A similar advance to the surface of the body is observed in the case of aneurism; in the progress of which, not only are the soft textures which intervene between the aneurismal tumor and the external surface of the body removed, but even bones, when they come in the way of the aneurism, are removed. All matters pass away, with great facility, by absorption.

This [exhibiting a preparation] is an example of aneurism in the ascending aorta, where you observe a large chasm in the sternum, through which the aneurism has advanced to the breast externally. This again [exhibiting another preparation] is an aneurism of the descending aorta, and you perceive that the ribs and side of the vertebral column are in like manner removed by absorption.

Aneurism advances to the surface in the same way as other tumors formed deep in the body—that is, at a considerable distance from the external surface; they make their way outwards by the gradual removal of the parts which cover them. This is not only the case in tumors which form in the soft parts of any of the limbs, or of the trunk, but even in those which form in the interior

of the cavities. For example: if a tumor forms on the surface of the dura-mater, although the progress externally is resisted by the skull, it will cause absorption of the bone, and come through.

This [exhibiting a specimen] is an instance of the kind, where the tumor has been formed on the external surface of the dura-mater; the internal surface of which is entire, but there is a part of the skull removed, and you see the tumor has made its way, and shews itself externally.

In all these various cases there is a gradual removal of the parts which intervene between the disease and the external surface, or between the disease and the surface of some one or other of the mucous cavities of the body. The parts are removed by absorption. This particular process is what is called by Mr. Hunter "*progressive absorption*;" it is the removal by the absorbents of the intervening parts in the progress of the disease to the surface of the body. The term "*progressive*" absorption is, perhaps, not very happily chosen, to designate any particular kind of absorption; because all absorption is necessarily progressive, and this kind of absorption is not progressive in any higher degree than any other sort. But the truth is, that, in this instance, the advance of the disease to the surface of the body is progressive, and that, I suppose, is what Mr. Hunter meant. At all events, this particular kind of absorption is not more progressive than any other.

The removal of the parts by absorption, in this case, is preceded by some degree of inflammation—that is, there is some previous thickening and consolidation of the textures, which are afterwards to be removed by the absorbents, so that the abscess or aneurism remains entire. There is no escape of matter from the cavities into the textures that are progressively removed. The contents of the aneurism, or abscess, are retained in the cyst, even during their passage through the intervening textures, owing to the parts by which they advance being consolidated by a

slight degree of adhesion which precedes the absorption.

A portion of the substance of the body may be removed, so as to occasion an external breach in the surface, or a portion of the surface of some internal organ may be removed in the same kind of way. The same process is observed in the separation of a slough from the contiguous living parts. You find that a groove takes place first along the margin of a dead part; that this becomes deeper and deeper, and at last it extends throughout the whole depth of the mortification, so as completely to separate the dead part from the living. This process is called by Mr. Hunter "*ulcerative absorption*,"—that is, the removal of a part by the absorbents, where an external breach of the surface is produced by the loss of substance; or, simply, it may be called *ulceration*. Now, this kind of absorption, like the former, is preceded by inflammation. The part is first red, hotter than usual, slightly swelled—interstitial deposition takes place in it, by which the textures are consolidated and thickened, and by which the blood-vessels and absorbents, which, in the progress of the absorption, will afterwards have to be separated, are completely blocked up. Now in ulcerative absorption—that is, if the process take place in the course of the blood-vessels and absorbents which are in part to be removed, they must be divided, and the adhesive inflammation which precedes the act of ulcerative absorption obliterates those vessels, so that no escape of fluids takes place, though the process of ulceration actually divides them.

Now in the case of ulcerative absorption, there is a formation of matter in the breach of the surface, which is produced by it; and that circumstance distinguishes this from the preceding case of progressive absorption. In progressive absorption there is no formation of matter as the parts are removed, nor is there any in what Mr. Hunter called *interstitial absorption*. But in ulcerative absorption—that is, where a part of the body is removed, so as to produce an external breach, or loss of surface—there the removal by absorption is accompanied by the formation of matter in the surface that is thus made.

Ulceration, then, may be stated generally to be the removal, by the absorbents, of a portion of the body, causing an external breach of the surface, or a solution of continuity, as it has been technically called, and accompanied by the formation of matter.

The process of ulceration does not consist in erosion, as it has sometimes been supposed—that is, the textures of the body that are removed are not chemically acted upon by any acrimonious or corrosive properties in pus, because pus possesses no such property; it is a perfectly bland and mild fluid—it has no solvent power over the textures of

the body. In fact, if pus had this power, there would be no limit to the mischief produced by ulceration. Ulceration, when it has commenced upon the surface of a sore, is moistened by pus; and if pus possessed the properties I have mentioned, it would destroy the surface, and there would be no end to the extent of devastation.

The process of ulceration, and the circumstances under which it arises, as well as the general phenomena of the event, are very various. These varieties depend on differences of structure in the parts which are the seat of ulceration—on differences in the nature of the inflammation which produces it—that is, whether it is common or specific; and on differences in the constitution and state of health of the individual who is affected. All the textures of the body are susceptible of ulceration. We see this exemplified when mortification has attacked an entire limb, and when the separation takes place by a natural process. Suppose, for instance, the foot and lower part of the leg were mortified, and the mortification stopped at the middle of the leg; you would see that the skin, the cellular membrane, the fascia, the muscles and tendons, blood-vessels and nerves, and, lastly, the bone itself, are all penetrated by the process of ulceration. A groove forms on the external surface, and extends through all the parts in succession; and finally will separate the bone itself; and thus you have a kind of natural amputation performed by the process of absorption. The ulceration acts externally upon the skin first, then through all the soft parts, and subsequently through the bone; so that you see the whole of the tissues that enter into the limb are liable to absorption. But all parts of the body are not equally liable to it—the skin is most prone to ulceration. Hence the great variety of ulcers we have an opportunity of seeing on the external surface of the body. The mucous membranes come next in order; then the cellular tissue, the bones and articular cartilage, and although, from the conformation of these textures, you might suppose they were not so likely to ulceration, yet they are frequently attacked by it. Fascia, tendons, and ligaments, are perhaps the textures which least readily run into ulceration; and hence it is that, in the progress of matter to the surface of the body, when an abscess takes place under them, they do not yield readily to the ulcerative process.

We are best acquainted with the phenomena of ulcers as they take place in the skin, because there all the circumstances of the process are open to the senses. The remarks, then, that I have to make respecting the history of ulceration, as it occurs in the skin, are applicable, with some modification, to the same process occurring in other textures of the body.

I have already mentioned that ulceration

is preceded by inflammation of the part. We find that a state of inflammation, and generally considerable pain, precedes the formation of an ulcer in any part of the skin. The skin becomes red, preternaturally hot, more or less swelled, and then we find that it begins to ulcerate at one or more points. We observe that the cuticle becomes loosened; or perhaps it may be elevated into small vesicles on the part. The cuticle thus detached assumes a whitish appearance, and the part is apt to take on a livid hue. When the detached and loosened cuticle is separated, we see a visible breach in the surface of the skin. There is a more or less deep excavation, in consequence of the removal of a part of the cutaneous texture. There may be one spot, or several contiguous spots; in the latter case, they join together, and form one common ulcerated excavation; and this extends in circumference and also in depth—that is, it becomes larger in all its dimensions. We find when we examine the parts, that so long as the absorbent process is going on, and before the process of restoration has commenced, there is a manifest excavation or loss of substance. We see clearly that some portion of the body is removed, there is a chasm, and this chasm shews the nature of the process by which it has been effected; it has a kind of irregular appearance, and the textures of the body which are exposed by the extension of the ulcerative process, are, in some measure, partly recognizable at the bottom of the ulcer. The surface of the ulcer is, perhaps, of a dirty whitish or yellow hue. There is sometimes the appearance of fibres, or threads, on the surface, and they are generally covered with a thin serous and sometimes rather bloody fluid. The edge of the ulcerated excavation is sharp, and defined on the margin of the skin, which is red, hot, and painful.

This is the appearance which an ulcer exhibits in a spreading state as long as ulceration is going on, and before steps are taken to repair the mischief it has produced. Unless the process of ulceration is put an end to, it soon goes through the skin, and destroys it. It then makes a chasm in the cellular membrane it may pass through, and affect the subjacent soft parts; and, in fact, there is no limit to the extent to which it may go, if the process be not arrested.

When the process of inflammation is checked, and when the removal by ulcerative absorption of the constituent textures of the body is put an end to, then we have the restorative process by which the breach is to be filled up. The process of restoration is accomplished in nearly the same way under four different circumstances; that is, *first*, in breaches produced by ulcerative absorption in the external surface of the body;

secondly, in the ulcerative surface which is produced after the separation of a slough; *thirdly*, in the exposed cavity of an abscess, when this has been opened, or when it has become exposed by bursting; *fourthly*, in ulceration on the surface of wounds in which there is loss of substance, or where the sides of the wound are not brought in contact. The process of restoration, by which the surface is restored in each of these four cases, is essentially the same. The new matter by which the chasm is to be filled up consists of a soft red substance, which, on the surface, is elevated into small red prominences, of a roundish or pointed figure, differing in size, and these, as I have mentioned, are kept moist on the surface by a secretion of pus. These small prominences are called *granulations*, and the process itself, taken altogether, is termed *granulation*. Although the secretion of pus is a common circumstance in the process of restoration, by which the chasms produced by ulceration are to be supplied, I believe we cannot say it is an universal one. It takes place in a great majority of instances, but I believe that in the case of ulceration of the articular cartilages of bones no secretion of pus is to be observed; and in ulceration of the cornea we cannot observe any thing like the secretion of pus. The presence of pus then is not a circumstance that can be admitted into the definition of ulcer. The definition of ulcer must probably turn merely on the breach in the surface of the body or of any organ—the chasm or solution of continuity that is produced by ulcerative absorption. We may, however, add, that the circumstance, in the majority of instances, is attended with the formation of pus.

Now the explanation of the restorative process is this: coagulated lymph is effused on the surface of the chasm or ulcer, and this coagulated lymph speedily becomes organized; that is, the blood-vessels, and absorbents, and nerves, are prolonged into it; and in this manner the surface of the body, where it has been interrupted by ulceration, is regenerated. Here you see the process is similar to that which goes on in inflammation. I have mentioned, that under inflammatory action, coagulated lymph is effused into a part; that the lymph is a receptacle in which blood-vessels, absorbents, and nerves, are formed; and thus the parts are thickened or increased in bulk. In the process of granulation, by which ulceration is to be healed, you have the same circumstance; that is, you have effusion of lymph on the surface of the body, and you have blood-vessels, absorbents, and nerves, extending into it; so that the process, in this view of the subject, is similar to that which takes place in inflammation; in fact, they are hardly to be distinguished from each other.

You will not be surprised to find that increased action in the neighbourhood of the part goes on. The surrounding parts are redder than the rest of the limb, and there is sometimes a sensible increase of heat in the part. Dr J. Thompson says that he attempted to measure the comparative temperature of the part where this process is going on by a thermometer; and he found, in an immense number of instances, the thermometer rising two degrees higher in this than the contiguous parts of the same limb.

I have mentioned that the terms *coagulated* and *coagulable* lymph are used rather vaguely in pathology. The truth is, our knowledge is not sufficient to enable us to apply these words in their strict senses. Heretofore the substance by which the breach of an ulceration is filled up—that which is effused on the serous membranes when they are the seat of inflammation—that which is poured into the interstices of a part under adhesive inflammation, was called coagulable lymph. This term seems to imply that the lymph would be in a fluid state, but that it admits, under certain circumstances, of coagulation. Mr. Hunter generally preferred the term coagulated lymph, because we find, when the substance is produced, it coagulates. Thus, on a serous membrane it forms a mass of a soft consistency, yet in a coagulable state. Dr. J. Thompson (whose lectures on inflammation contain a valuable collection of facts relating to the process, and to all its varieties and effects—in fact, it is a work you would find very useful, though I believe it is out of print; and I think it would be a valuable service to the public if he were to reprint it, with such an addition of new matter as he may have obtained subsequently to the time at which the former edition was issued), speaks of this lymph under the term of *organisable* lymph, because it is a striking circumstance in its character that when it is effused in a particular part of the body it speedily becomes organized, so as to constitute some new substance or addition to the body. I merely make these observations to shew that, under the name of *lymph*, or *coagulable* lymph, or *coagulated* lymph, or *organisable* lymph, the same substance is meant which has been mentioned repeatedly in the course of these lectures.

This, then, is considered to be but the basis of that soft reddish substance constituting granulations, by which sores are to be healed. I have mentioned to you that soon after this is deposited in the sore or ulcer, it shews blood-vessels, absorbents, and nerves, so that it becomes regularly organized. Respecting the existence of blood-vessels in these granulations, you can be but little at a loss for a proof of that circumstance. In the first place there is a red color, which de-

pends on the presence of blood, and this is uniform throughout the substance. This shews that it not only possesses blood-vessels but that it is extremely vascular. Sometimes the color is florid and bright; sometimes it is more livid—more like the venous blood. However, by looking attentively on the surface, you can see blood-vessels in the granulations with the naked eye; and if you employ a slight magnifying power, you see them in great abundance. If the part in which the ulceration is situated be injected, the sore is rendered completely red, which would not be the case if there were no blood-vessels; and a slight degree of violence inflicted on the ulcer causes it to bleed, and proves that the blood-vessels are of considerable size. We have an evidence of blood-vessels in the new part by the pus which the granulations are capable of furnishing. It is equally clear that these granulations possess *absorbents*. Frequently the granulations diminish in size, or are entirely removed from the surface; and we find, that by absorption, certain medical substances applied to the sore produce their peculiar effects just the same as they would if taken into the stomach. Thus, if mercury is applied, in the form of ointment, or in other shapes, to an extensive sore, as in that of red precipitate, it sometimes salivates persons in consequence of its being absorbed. If arsenic is applied, in a certain form, to a sore, it may produce inflammation and ulceration of the stomach, and, in fact, death; just as it would do if it were swallowed. Opium, applied to a sore, will produce its particular effect by absorption. The existence of *nerves* in granulations is abundantly manifested by the pain. Frequently a very acute pain is produced by offering any violence to them; in fact, a granulating sore is a very sensitive surface. Although the part is newly formed that has thus, as it were, sprung up in the body, yet in two or three days you find that it has a supply of nerves which will render it a very sensitive texture indeed; so that the person will sometimes experience acute pain from the slightest touch of these granulations.

This effusion of coagulated lymph, then, is organized; that is, penetration by blood-vessels, absorbents, and nerves, takes place in a shorter time than we might expect; in fact, so short is the time, that we are at a loss to account for the mode in which the process is effected. When we look at the blood-vessels, and see these produced in twenty-four or forty-eight hours, we are at a loss to explain the mode by which this organization of the coagulable lymph takes place; indeed, we do not know whether the vessels are newly formed in the granulations, or whether it is an extension of the vessels from the surface on which the lymph is deposited;

and we are equally at a loss to know how these granulations acquire their supply of nerves. These are points on which at present we possess no clear or distinct information.

When two granulating surfaces are brought together, and kept in contact, they will unite; the vessels belonging to them assimilate and grow together. The union sometimes takes place rapidly. I remember an instance of a patient brought to this hospital in whom a considerable flap of the scalp had been detached by an accidental wound. It was necessary to apply a poultice to the part in consequence of the injury the surface had received. After a time, under the application of a poultice and other means, the bruises on the surface became clean, and formed a granulating surface. There was now a flap on the scalp, the internal surface of which was regularly granulated,—and there was a corresponding granulating surface on the skull, to which it could be applied. The flap was placed in direct apposition on the surface of the skull which had been denuded, and in twenty-four hours from being so applied, it stuck—to use a common expression—as close as wax; the union of the two in twenty-four hours was quite complete. We had another instance of the facility with which opposed granulating surfaces become united together, in some accidents happening to the eye. When an acrid substance, such as lime, is thrown into the eye, it affects both the surface of the globe of the eye and that of the eye-lids: it produces partial death or sloughing; and, subsequently, ulceration. You have, then, a granulating surface of the lids in contact with the granulating surface of the globe of the eye; and the disposition to adhesion is so great that you often cannot by any means prevent them from growing together; and thus is produced the case which has been designated by the term *symblepharum*, accretion of the eye-lid to the globe of the eye. I have seen instances where accidents have happened, where great pain has been given by keeping the eye-lids distended by art to prevent this accretion, because it is attended with serious consequences, more particularly if they become united with the cornea; in which case it generally involves the loss of sight. I sometimes find it impossible to prevent the lid from becoming united with the eye in such cases.

The process of granulation has been considered to be a property of the cellular substance. It takes place, as I have mentioned, in almost all parts of the body, and you might therefore at first doubt whether it can be considered as belonging peculiarly to the cellular tissue; but this enters into all parts of the body—it is a kind of base, or ground-work, of the structure. It

would be difficult to determine, in such a case, whether the production of granulations belongs simply to the cellular tissue which enters into the composition of particular organs, or whether it is the peculiar product of the organs themselves, such as with regard to the muscular fibres in case of muscles—whether these have any share in forming granulations. We find the granulating process is most abundant and most active where the cellular tissue is in the greatest quantity. This is the case in wounds of the integuments. In wounds produced by burns, for instance, we find granulations formed with great rapidity, and in large quantities, which rise above the surface of the sore; and, in fact, it is difficult to keep them down—to repress them within the bounds we desire for the purposes of union; so that I think the notion first broached by Bichat, that granulation is the property of cellular membrane, is a correct one.

When the granulations in an ulcer rise in this abundant and luxurious way above the margin of the sore, it constitutes what persons, in common language, term "*proud flesh*." When the chasm in the ulcer is completely filled up by this granulating process, then another process remains by which the surface is to be skinned over and covered. The granulations first fill up the hollow of the ulcer to level it with the surrounding sound parts; and we then find a thin small pelicle extended over the granulations from the edge of the sound skin; and when this pelicle is extended over a portion of the granulation, the secretion of pus in that part ceases. At first we observe just a margin of this kind on the very border or edge of the sore. We find the pelicle extended from the edge of the surrounding sound skin over every other part of the sore, and it gradually becomes thicker. At first there is just a thin rim round the margin, that enables this pelicle to extend in circumference towards the centre of the sore; and, ultimately, it covers the whole of the granulating surface. The secretion of pus is then entirely stopped; and, in fact, the sore is said to be healed. The process by which the skin is formed and the pelicle extends over the sore is called *cicatrization*. When the process is complete it is distinguished by something of a red color—by a sort of compactness of texture—by the existence of certain lines and marks which connect the structure to the natural skin. That surface is called a *cicatrix*, which is equivalent to the common expression of *scar*. The cicatrix, or scar, when it is first formed is redder, and apparently more vascular, than the surrounding skin. It is very thin and delicate, so that it easily gives way under a slight application of force, and tears or breaks. But in process of time this great redness disappears;

and, in fact, the cicatrix becomes rather paler than the rest of the skin. The tenderness of the part, which renders it liable to break or crack, is lost; and it becomes harder, and unites more closely together. The ultimate stage of the cicatrization, or formation of the scar, is its losing the peculiar characters which distinguish it from the surrounding skin, so that it is difficult to trace it. The pelicle successively undergoes absorption; and the consequence is, that the surrounding sound skin is elongated and drawn gradually towards the centre of the sore. The granulations are absorbed successively, in proportion as the cicatrization forms over them; and thus the surrounding skin is gradually drawn towards the centre of the sore, becoming, at the same time, more or less puckered in consequence of this drawing together. The effect of this conjunction is to render the cicatrization not more than one-third or one-fourth in extent, compared with the original size of the sore. Thus, a sore that may have been four inches in length, when effectually healed, will finally be reduced to two inches, or one inch in length; and will be proportionably reduced in all its other dimensions.

Now this is a circumstance of great consequence, because the cicatrization which remains after the ulcer, is a part of weaker vitality than the natural surface of the body. Hence it is of course a great object to have the weaker part as little extensive as possible. This absorption of the granulations, and consequent contraction of the scar, and the drawing of the neighbouring parts of the sound skin over the ulcer, accomplishes a very useful end. We see, then, that the granulations which have filled the sore during the healing process, serve the particular purpose of accomplishing this restoration, and then they are removed. They seem to constitute a kind of temporary structure, and are organized until a certain purpose is advanced, and are removed as soon as that purpose is answered.

Now a question has arisen respecting the degree in which the lost parts of the body are reproduced. When surgeons observe a large excavation in a limb, produced by ulceration; when they see granulations arising in it, and filling up the cavity; and the surface then completed by cicatrization, they conclude that the substance that has been lost in consequence of ulceration, and is restored, is reproduced by granulations; and have fancied that in such cases the particular texture—that which had been removed in the process of ulceration, is restored in this way. For instance, that muscle was deposited if muscles had been removed by the ulcer; cellular, or serous membrane, where such had been removed, &c. Others take a different view of the subject, and have

stated that the filling of the chasm in these cases arises from the subsidence of the parts which are preternaturally swelled around; and have even denied the process of reproduction altogether.

That reproduction takes place to a certain extent there can be no doubt, for we see a quantity of new substance, under the term granulation, deposited in the cavity of the ulcer, and filling it up. That there is a deposition of new matter, to a certain extent, cannot be contested. However, the limit of reproduction is easily ascertained in the human body. No entire part is reproduced when once it is lost: the only exception is in the case of the large bones of the body, the shaft of which may be entirely reproduced; which appears in the case of necrosis. I do not know a case in the body in which an entire organ or part is reproduced. We see that, when a finger is cut off, it does not become formed again; or if we cut off a particular part, it is not reproduced. In this respect man, the more complicated animal, differs materially from those of more simple structure. In the lower class of the animal kingdom we find that the reproductive power extends to the restoration of entire and even complicated organs. It is well known, with respect to the crab and the lobster, that one of the great claws of these animals can be reproduced when it is separated, and that fresh claws sprout out from the situation where the original ones had been detached, being first small, and gradually growing larger. Thus entire parts are reproduced in the case of some of the lower animals—such as some of the molluscæ and reptile tribes; and even complicated organs can be reproduced in this way. But in the case of the superior animals, no complete organ, when removed, can be restored.

Parts that are divided can be *re-united*, and the substance, or medium of union, though not exactly corresponding with the original tissue, answers all the purposes of it. A divided muscle, for instance, may have the ends united by new matter, which we recognize when we look at it as something different from the fibrous texture of the original, and it is the same with respect to the tendons; but the muscle and tendon is capable of exerting the same power as formerly. Even cartilage can be re-united.

Farther, the breach that is produced by ulcers can be filled up, and the surface of the body covered by a material that answers all the purposes, though it is not exactly like the natural skin. You can distinguish it by the appearance of a scar or cicatrix upon the external texture of the skin, but the surface thus formed answers the needful purposes. But although the breach of the ulcer is filled, although the loss of substance on the surface of the body is renewed, you do not find that

any of the textures that have been destroyed in the course of the ulceration are reproduced. For instance, if the cellular membrane between the skin of the thigh and the fascia be lost in the course of ulceration, the skin is afterwards closely adherent to the fascia, instead of being separated, as in the natural state. If the skin and fascia be both destroyed, then the cicatrix becomes fixed to the muscles; and in the same way, the skin, or muscle, or both, become firmly fixed to the bone.

With respect to the treatment of ulcers under the circumstances now mentioned, it is necessary, in the first place, to remove the inflammatory disturbance on which the commencement of ulceration and its progress depend. Together with the measures necessary for that purpose, you probably find it expedient to cover the part with a soft poultice. When the inflammatory disturbance is at an end, and when the process of reproduction has commenced, really the surgeon has not a great deal to do: nature performs the restoration, and it is enough, perhaps, for us to take care not to do anything that can interrupt her operations. The part must be kept at rest, and covered in such a way as to protect it from any external influence that might be injurious; it should be covered with a soft poultice, such as bread or linseed. When the process is advanced, these may be supplied by a simple dressing, such as lint plain, or covered with a simple cerate ointment, confined with a proper bandage. This is pretty much what is necessary in the treatment of ulcers generally, and this turns on two points—first, on removing the inflammation, which is the cause of the ulcer, and next on keeping the patient quiet when nature is performing the necessary process of restoration. In respect to the latter point, I need not observe (for it is a rule that belongs to the treatment of all cases) that you must pay much attention to the diet of the patient, giving him those things that will tend to keep him in the best possible state of health.

I should have observed, in speaking of the process of granulation, that a certain degree of exposure of the surface to the air is necessary for its successful prosecution that an entire abscess does not granulate; but when the abscess is come to the surface of the body, and when it has been opened or become exposed by the natural process of ulceration, granulation will commence in it. It never begins to granulate so long as it remains entire. In the same way sinuses do not granulate with facility. While sinuses remain entire, we find it difficult to produce healing. But if we slit up the fistula, so as to make an external surface, granulation then commences; and when it does this we find it necessary to keep the part moist by a soft dressing, in order to

prevent it from uniting at the sides before it unites at the bottom. Hence we find, when abscesses extend deeply, they heal with more difficulty than when they are seated superficially. If an abscess is just under the skin, it heals readily in a short time; but if the abscess is seated deeply—that is, if it be deep in the substance of the limb—then the process of healing does not take place at all readily. It will continue for a long time fistulous, and difficulty is experienced in bringing it to a healing state; so that a certain degree of exposure is necessary to the formation of granulations. When I say a certain degree of exposure, you are not to understand that the part is to be left exposed to the air, or external influence, but I mean it must be left on the surface of the body. You must protect it from the air, which alone, in the tender state of the wound, might interfere with the process of healing.

With respect to the variety of ulcers, and their characters, as well as the different treatment they require, I must postpone that part of the subject till my next lecture.

EFFECTS OF LOSS OF BLOOD.

To the Editors of the London Medical Gazette.

GENTLEMEN,

I BELIEVE every one has heard of some interesting experiments on the effects of loss of blood by Dr. Seeds, but very few have seen the account of those experiments, or indeed know where they are to be found. I think, therefore, you would do a great service to the profession by reprinting them from the accompanying copy of the *Medico-Chirurgical Journal and Review* for "January to June, 1816."

I remain, Gentlemen,

Your obedient servant,

MARSHALL HALL.

15, Keppel Street,
Dec. 26, 1829.

We solicit the attention of the medical reader to the following experiments, which, with others now making, of a similar nature, in different quarters, may lead to more important results than at first sight might be expected.

Concerning epileptic disorders, medical authors, from the commencement of

our science to the present day, have offered many conjectures; but who is not aware that the real nature, and consequently the proper method of treating them, are equally involved in obscurity? As the difficulty and uncertainty of the subject are universally admitted, it is hoped that indulgence will be shown to any attempt, however humble, at throwing light on this interesting topic.

The experiments which are to be detailed, were carefully made, and every circumstance narrated as early as possible, so that their accuracy may be depended on, one or two professors always being present, and subsequently revising the details.

1st Experiment.—The left crural artery of a healthy dog was divided. The struggles were incessant, and greatly accelerated the pulse, but he scarcely seemed to suffer pain, except on the first division of the integuments.

In little more than half an hour from the commencement, the artery of the right leg was divided; the vessel first opened at this time beat very languidly, and in a short time ceased to pour blood, whilst the other continued active to the last.

The heart beat very strongly, and its motions were distinctly perceptible over the whole thorax and abdomen. When the limbs had become cold, and no sign of life was present, the heart still palpitated, the respiration was still laborious. In an hour life ceased.

On dissecting the body, we found the spinal marrow pale, except at the top and bottom, where it was slightly red; on the contrary, the nerves on the points were whitest, and reddish in the middle. The sinus venosi were bloodless. The dura mater cerebri was slightly red, and one rather large blue vessel was seen on the corona.

The substance of the brain was very white, as were all the nerves, except the optics and first pair, whose base was slightly red.

The ventricles were so full of water, that till we had witnessed a similar result in other experiments, we were doubtful of its having been all effused during the experiment.

The right side of the heart was very soft, and contained some black clotted blood; the left was very hard and thick. The viscera were generally pale. Some

of the mesenteric glands were full of a dark coloured liquid.

The palpitation of the heart, the most conspicuous symptom in this case, was very great; it plainly shows, in what state of the body such are likely to happen, and it likewise warns us not to judge of the vigour of the blood from a partial examination, for not unfrequently, when death is just at hand, the heart beats as though it would burst the thorax; at other times, when the smaller vessels are collapsed and deprived of vitality, the larger trunks are powerfully contracting.

Do we not see from this, that, for the due circulation of the blood the heart has need of a vigorous support from the arteries?

The weakness of the body was on a par with the difficulty of breathing, and both advanced with equal steps; hence it appears how intimately the functions of the lungs and blood-vessels are connected.

On dissecting the body, we found that every part was bloodless; especially the different parts of the nervous system.

Why, from opening those vessels, was the body so completely drained of blood? and particularly venous blood?

2d Experiment.—We procured a small dog who had a wound on the right side, penetrating the lungs; from this wound he seemed to suffer little uneasiness during a week that he was in our possession.

The left crural artery was cut. The respiration was very much hurried, and the air was expelled with a loud hissing from the wound in the side. The strength of the heart's motion slowly and gradually diminished: once indeed, a sudden and rapid acceleration of the discharge of blood took place. The weakness of the pulse and dyspnoea were equal, and uniformly kept pace with each other. The legs were alternately bent and extended, and the tongue thrust out of the mouth and again drawn into it. The pupils became insensible to light long before life ceased. In little more than half an hour death put an end to his miseries.

On the following day the body was examined. The dura mater of the brain was colourless and bright. A few small red vessels were seen on the surface of the brain, and amongst its convolutions; its substance and all the nerves were soft and white.

The plexus choroides was of a bright red; there was no blood in the head, except in the basilar veins, which contained a little.

The medulla spinalis could not be properly examined, owing to an unfortunate accident which occurred.

We could not inflate the right lung; the left presented nothing unusual. A few red spots were observed on the stomach. There was a little red blood in the mesentery and omentum. The colon was somewhat contracted, the small intestines crepitated on being handled. The urinary bladder was hard, contracted, and empty.

No one doubts that the integrity of the functions of the lungs is necessary to the health of the body; it appears equally true, that the more readily the blood is received into the lungs and returns through them to the heart, the more completely do we enjoy health.

This fact is of the utmost importance both to the student and practitioner of medicine.

This animal laboured under a wound of the lungs, which impeded their functions and interrupted the ordinary changes of blood; thus, though he lost less blood, he was sooner weakened, and much sooner destroyed, than the subject in the preceding experiment.

The irregularities of muscular action were more evident, both in the voluntary and likewise in the involuntary muscles.

Does not this experiment teach us, that in some cases of diseases of the lungs, an excessive venæsection may prove injurious?

3d Experiment.—An incision was made into the subclavian artery of a small dog. The pulsation of the arteries was immediately quickened, and rose at first to 130, and not long after to 156 in the minute.

The motions of the heart were languid, but regular; they had ceased long before death. In less than a quarter of an hour the pupils were dilated and motionless.

The breathing soon became slow and heavy, and at the same time the neck was slightly twisted. In twenty minutes death supervened.

The thorax was first examined. The right side of the heart was empty, and flaccid; almost all the large veins were full of blood; and in the left side of the heart, and in the abdominal aorta, there was a little dark blood.

Most of the abdominal viscera were pale. In the spleen and pancreas were many dark spots. A very small portion of one of the ureters was ossified. The nerves every where were white and shining. The d. m. c. was colourless. Almost all the sinuses were dyed with blood. Many red and blue vessels were seen among the convolutions of the brain. The plexus choroides was of a bright red. The whole surface of the brain was moist. There was some degree of redness in the spinal marrow, especially in the lower part, as well as of all the nerves. The external coverings of the cord were nearly colourless. No dark coloured blood was to be seen.

In this instance the prostration of the strength was greater and more rapid, and life was sooner extinguished, than in either of the former examples.

The subclavian artery giving off the vertebral, it was to be supposed would, if wounded, speedily affect the head.

Why were the pulsations of the heart so soon and so greatly accelerated? Why so much more venous blood left in the body than before?

4th Experiment.—The carotid artery of a very small dog was opened in the middle of the neck; the blood rushed impetuously to the distance of several feet. In two minutes the strength of the animal sunk, nor did it ever recover vigour.

The motions of the heart, though feeble, were regular; the breathing was hurried, and somewhat irregular.

For a considerable time before death, the body was alternately bent and contracted, in a manner resembling shivering; shortly before death, the breathing became hoarse and laborious.

The cries of the dog were at first shrill, but gradually became feeble; and at last a feeble howl only was uttered: the face and limbs speedily became cold; in ten minutes life ceased. The limbs at this time were flaccid and flexile.

The viscera of the abdomen appeared plentifully supplied with both red and blue vessels. The small intestines were somewhat contracted, and contained three or four lumbrici. The urinary bladder was rugous, and empty. The vena cava was pretty full; and some small dark clots were found in the aorta.

The lungs when inflated were white; but when collapsed, they appeared red-

dish. A small quantity of blood was found in most of the large veins.

The dura mater of the brain was colourless and transparent, except at the falx, where there was a red spot, and some slight adhesions.

The lateral ventricles contained a great quantity of water. The plexus choroides was pale; a few red vessels were seen amongst the convolutions, and one blue one distended on the corpus callosum. The nerves were colourless, except the optics, round whose origins a few red vessels were seen.

The sinuses were quite bloodless. As for the spinal marrow, its tunics were rather red at the top and bottom. No venous blood was to be seen in any part of the vertebral column.

Bichât asserts, that he has found by experiment, that the curvatures of vessels do not impede the motion of the blood; but we are induced to suppose he might have erred, for, on opening the carotid artery, a great quantity of blood was immediately lost, and the animal was, as it were, destroyed at one stroke. It was not so when the *subclavian* was opened; and this vessel, though more curved, is not more distant from the heart.

Bichât, when investigating this subject, chose for the objects of experiment, vessels remote from the heart, as those of the intestines. As we shall see afterwards, a much greater quantity of blood was lost from the carotid when opened than from the aorta itself. Blood was deficient in most of the organs; the nerves were, for the most part, moist and bloodless.

On the opening of arteries, dark or venous-coloured blood almost always abandoned the brain. What reason can be assigned for this fact?

5th Experiment.—All the larger veins of the legs were opened in a small dog. At first the pulse was accelerated; soon after it became slow and languid. The heart's motions, though feeble, were never irregular; and, indeed, long before death, they could neither be seen nor felt. Borborygmi were early heard, and lasted a long time. The breathing at first was hurried; soon it became slow and laborious, at last convulsive. The pupils were frequently examined; they became gradually less and less obedient to the influence of light, and at length ceased to contract altogether. Slight spasmodic contractions took

place, first in the femoral and abdominal muscles, then the head, neck, and fore legs, were likewise powerfully affected with spasms.

At this time a deep sleep seized the animal; he breathed slowly and with difficulty, and for a little time before death, respiration, at intervals, was suspended altogether. Whenever the breathing was strong and quick, the pupils recovered their tone, and the blood was more strongly propelled. In an hour, death closed the scene.

Some degree of stiffness was apparent in the legs, especially the fore ones.

The dissection of the head was first begun. The membranes of the brain were *loaded with turgid vessels*, the larger of which were of a very dark colour.

A bright red spot was observed near the cornua, where some degree of sanguineous effusion had taken place. The sinuses were full of blood.

In all the ventricles there was more or less water effused; the base of the brain, and the eighth and ninth pairs of nerves, were inundated with water; a net-work of red vessels was spread round their origins, and the optics were in the same state. In the cervical and lumbar regions of the spinal marrow, there was a considerable degree of redness. The right side of the heart was full of blood; the left auricle contained a little; some blood was found in the large veins, and a few clots in the thoracic aorta.

The stomach and all the intestines were tumid with flatus. The veins of the mesentery were turgid. The larger veins of both legs being opened, although life was not speedily destroyed, yet it quickly brought on the greatest degree of debility; the slow weak motion of the heart, the languid countenance, the disturbance of all the functions, the apoplectic stupor under which he laboured, all conspire in proving this.

The turgid state of the veins of the head was very remarkable: indeed, throughout the whole body the veins were tumid.

Flatulent distentions of the stomach and bowels frequently distress the enfeebled; and it is well known that they result from excessive evacuations; all aged persons, those labouring under constipation or too great laxness of the bowels, or a hæmorrhage of any kind, are subject to this distressing affection.

6th Experiment.—A healthy young dog was the subject of this experiment. On laying bare the internal jugular veins, we remarked that they swelled much during expiration, and vice versa.

On freely opening these vessels, the blood burst forth with impetuosity, and the animal's strength sunk almost immediately. They had scarcely been opened, when the heart beat strongly and sharply, and a severe panting came on.

The head, neck, and back, were affected with powerful spasms. After two minutes the pupils ceased to contract; and the eyes were twisted towards the nose. In about ten minutes he died.

The lungs were white with different coloured spots; a large black spot was also observed in the diaphragm.

All the veins of the head, neck, and chest, were tumid; moreover, the aorta and its larger branches were slightly stained with blood.

In several of the viscera of the abdomen there were black patches, particularly in the liver and spleen; and in these places they were very weak, and easily torn.

The whole of the intestinal tube, as well as the stomach, was full of flatus. A little blood was found in the mesentery and omentum. The appearance of the brain was very similar to what it was observed to be in the last experiment; a greater number of distended veins were seen, and every thing was overwhelmed with water.

Round the root of the fourth pair was spread a plexus of vessels, and in a less degree round the eighth and ninth pairs.

In every sinus there were clots of dark blood. The tunics of the spinal cord were very red, especially the dura mater. On almost all the spinal nerves there was some degree of rubescence. The sinus venosi contained some clotted blood.

Why did this animal perish so rapidly, as if struck by lightning? The event was not at all in the ratio of the blood lost. All the symptoms clearly showed that the brain was immediately compressed; which conclusion the anatomical examination of the body confirmed.

The contents of the cranium and spinal canal were so gorged with blood that it might at first have been imagined that blood-letting would have saved the animal.

It does not seem out of place to remark here, that in every animal destroyed by blood-letting, and examined by us, we always found more or less of serous effusion in the brain, cerebellum, spinal marrow, and at the origin of the nerves; thus we clearly see why those examining the contents of the cranium have so frequently observed very turgid vessels and water effused, and likewise why venæsection has, in apoplexies, so frequently disappointed the expectations formed of it*.

7th Experiment.—The right jugular vein of a young dog was divided; the flow of blood was copious and rapid for ten minutes, afterwards it became slow; the respiration was greatly hurried, so that he breathed 114, 120, 150, and at length 180 times in a minute.

At these times the discharge of blood was either scanty or ceased altogether, and the breath became cold; but when respiration was less hurried, the pulse became more regular, and the breath warmer. The upper orifice ceased to discharge blood before the lower. The heart's beats were at first unusually quick, soon they became feeble and slow, and sometimes were imperceptible.

In little more than half an hour we cut the vein again, and cleared it of a clot of blood; this appeared to give no pain. The eye-sight soon became obtuse, and not long before death the pupils were immoveable. Almost the whole body was twisted by spasms. After eighty minutes had elapsed, no signs of life were visible.

On examining the dead body, we found the whole of it stiff and twisted. The intestines were much swollen with flatus, the rectum and urinary bladder were contracted and rugous. All the veins of the thorax and abdomen were tumid. The right side of the heart contained a good deal of fluid blood, whilst a little was found in the left side and in the aorta. On the membranes of the brain a wonderfully great number of

* The above appearances certainly could hardly be expected *a priori* from theory; but we are of opinion, that although they were produced without doubt, by *venæsection ad mortem*, yet that a state the very reverse is produced by moderate venæsection, and in the early stage of this extreme blood-letting. The above experiments, however, elucidate the fatal effects of carrying blood-letting beyond a certain point, inasmuch as we then produce what we are anxious to prevent—congestion and effusion.—**EDIT. M. C. T. & R.**

veins was seen. A great deal of water was every where effused. Most of the nerves were pale; the eighth pair exhibited the same appearance as in the last experiment. The sinuses were full of thin watery blood. The membranes of the spinal marrow were plentifully supplied with red and blue vessels; the spinal nerves were covered at their roots with red vessels. At the same time that the breathing of this animal became very rapid and frigid, the flow of blood ceased, and the whole body became cold.

All the moderns, with one consent, agree, that the temperature of animals does not solely depend on the chemical action of the blood in the lungs; but that the powers of life, in some unknown manner, connected with the nerves and nervous system, over-rule and direct all the functions of living animals. What reason can be assigned for the superior orifice ceasing to discharge before the lower?

The loss of sensibility was proportioned to the loss of blood.—When much blood has been lost, or when it has been vitiated, the effects of all stimulants are very much diminished: many facts prove this.

Let a little of any active substance, as alcohol, opium, or digitalis, be given to a person faint from the loss of blood, what do we see happen?

The pulsation of the heart and arteries is slowly and slightly increased, and a gentle degree of heat is slowly diffused over the whole body. On repeating the remedy, the colour, from being changeable, becomes constant. The same may be said of a person labouring under severe typhus fever.

Who is ignorant that if a healthy person should take these substances, the result would be widely different?

Why was the death so tardy in this instance?

8th *Experiment*.—The abdominal aorta of a small dog was nearly divided.

On the left parietes of the abdomen being cut, all the more moveable intestines protruded. The vessel was opened at about half an inch from the commencement of the iliac arteries.

The blood flowed with great force; the motions of the heart immediately became weak, but remained regular till the termination of existence. The breathing, at the same time, was slow

and heavy; and was effected with open mouth and the head thrown backwards, as if the animal panted for breath.

In four minutes time the pupils were dilated, and immoveable; the eyes, however, still retained their splendour. In six minutes he expired.—We first of all examined the viscera of the abdomen.

The intestines appeared plentifully supplied both with red and blue blood: the veins of the liver contained clotted blood. In both sides of the heart coagulated blood was found, in greatest quantity in the left, as likewise in the aorta descendens and vena cava; most conspicuously, however, in the former. The lungs, especially when inflated, were pale; their veins, and likewise the thoracic, were far from empty. The dura mater cerebri was moist, and some few red vessels were ramified through it. Vessels, red and blue, were conspicuous in the other tunics; the plexus choroideus was pale; the ventricles were moist, the fourth was full of serum, a good deal of which was effused round the optics, the accessories, and the eighth pair. The greater sinuses were full. The larger vessels were of a dark colour, while the smaller, and those surrounding the origins of the nerves, were red.

The dura mater of the spinal cord had nearly the same appearance as that of the cerebrum. On removing this tunic, at the top of the medulla, there was a great deal of bright redness; a less degree of it lower down, and at the bottom some larger and darker vessels were seen. There was some degree of effusion within the dura mater, especially at the bottom of the cord.

The nerves were, for the most part, colourless. The fatty tunic was dark coloured, and the sinus venosi contained a little watery blood. Here the strength was quickly and equally broken.

Why was the left side of the heart, as well as the aorta, near the part cut, so full of clotted blood? It is well known, that when any thing opposes the motion of the heart, its parietes are, in the same ratio thickened; but in this experiment, we see the heart and aorta full, when every obstacle to their emptying themselves appeared removed. This shows that there is a necessity for some degree of resistance from the arteries, that the heart may perform its office. As in other instances of arterial bleeding, the intestines were found free from flatus.

9th Experiment.—The abdomen of a dog was opened on the right side by a free incision: all the moveable intestines were protruded, but escaped unhurt. An incision, an inch in length, was made at the entrance of the renal veins. The flow of blood, at first large, soon became less, and at length ceased; it was frequently renewed, but with less violence. The discharge was interrupted at a time when the heart continued to move regularly, and when the orifice of the vein was still open.

Towards the termination of life, the breathing became laborious, and was accomplished with the head raised and the mouth widely opened, and a weak involuntary howl was uttered. The pupils continued to contract for a long time, but at length they became insensible; the muscles of the eyes were spasmodically affected, as were the muscles of the breast and neck, especially the sternomastoideus. The face, limbs, and ears, speedily became cold; and long before death the breath was frigid.

On opening the cranium, great vascular turgescence was perceived in the membranes of the brain, and a deep red spot at the apex. The sinuses were all full. The surface of the brain was moist, and the ventricles contained a good deal of water.

The origins of the second, third, fourth, eighth, and accessory pair of nerves, were in the state so frequently spoken of. Considerable redness of the upper part of the spinal cord was seen.

The nerves of the cervix, and upper part of the dorsum, resembled the greater part of the cerebral nerves; the rest were quite pale. The sinus venosi were full.

The left side of the heart was wonderfully hard, and contained clots of blood; the pericardium was very moist. Abundance of arteries and veins, full of blood, were seen on the mesentery and intestines. The mesenteric glands, and those of the neck, were very tumid. The right kidney was a third part larger than the left.

The death of this animal was the most tardy of any. The blood, on the vein being first opened, burst forth with great violence. Why, we may ask, was the death so slow, when, from opening the aorta and the jugular veins, the fatal event so rapidly took place?

The debility exceeded the ratio of the

blood lost; for the bodies of those dogs which perished from arterial blood-letting, not only lost more blood, but were almost entirely deprived of it. A singular circumstance occurred during this experiment, viz. that the flow of blood ceased while the heart's motion continued uninterrupted. Here we may remark, how surprisingly the symptoms occurring during life accorded in every instance with the dissection. Were the eyes torpid, were their muscles convulsed, the optics, the third, fourth, and sixth pairs, severally and conjointly, were affected in the manner so frequently alluded to; were there at any time spasms of the neck and sides, the upper spinal nerves were found after death to have a net of red vessels spread round their origins, and serum was effused round them. The same may be said of all the other organs of the body and their nerves.

The summary of the conclusions to be drawn from these experiments will, it is hoped, in some measure answer the question proposed for solution; which is, is there any difference between the effects of venous and arterial bleeding? and what is the precise nature of the difference?

The drawing blood from an artery diminishes more especially the quantity of venous blood: therefore arteriotomy is to be preferred when the veins are tumid.

The loss of arterial blood does not speedily disturb the respiration nor the heart's motion, nor does it rapidly break the strength; therefore, where we particularly wish to preserve entire the more important functions, let arteriotomy be had recourse to.

From arterial bleeding convulsions appear not apt to occur; therefore against such affections arteriotomy would most avail.

Blood let from veins does not particularly diminish the quantity of venous blood, but greatly disturbs respiration and the heart's motion, debilitates to a surprising degree, makes the veins every where turgid, and induces convulsions; therefore, when the pulsation is universally strong, as in every active inflammation, venæsection will be most serviceable; however, great caution is necessary in both, lest spasms be brought on.

If an excessive quantity of blood be lost, either from an artery or vein, water

is effused within the brain; therefore, in drawing both, there is need of great caution, lest the tongue become cold, or the patient become sick, or his pupils dilated.

What are the symptoms of effusion of water within the brain?

In the removal either of arterial or venous blood, whenever the pulsations of the heart become very quick and feeble, the blood-letting should be stopped.

Thus, I think, we have learnt, that arterial and venous bleeding produce very different effects.

It is much to be wished that morbid dissections were carried on with the attention and zeal their importance so justly merits; we should then obtain a true knowledge of diseases, and consequently useful and comparatively certain methods of cure. Till the topography of diseases is established, till we ascertain their locality and individuality, and are able, as it were, to lay our finger on the focus of disorder, medicine will be always uncertain, always conjectural. If, as Dr. Saunders so justly and earnestly inculcates in his lectures, all the phenomena of life, (whether in health or disease) depend on the relation between the vascular and nervous systems, and that every living action, whether healthy or morbid, must be preceded by some change or changes in this relation, we have at once Ariadne's clue in our hands, which, if we follow its directions, will, in time, liberate the medical profession from the endless maze of conjectures, doubts, and difficulties, with which medicine is so much involved.

Why, it may be asked, has medicine made so little progress, compared with other arts and sciences? Is it not for want of fixed and definite principles of reasoning? Is it not evidently because there are few well understood and easily appreciable data upon which to build a solid superstructure? Can we wonder that systems, founded on gratuitous assumptions and partial limited views of nature's operations, so rapidly rise and so rapidly moulder into dust? It cannot be too frequently repeated, that no medical opinion is of the smallest worth that clashes with correctly observed phenomena, either of health or disease.

How is a correct knowledge of the anatomical nature of diseases (if I may

so speak) to be acquired? Is it not by patient and careful investigation of the symptoms of disease, compared and contrasted with an equally sedulous examination of *each and every principal organ of the body*, especially the brain, medulla spinalis, and their respective nervous cords, with great attention to the changes of relation between the vascular and nervous system throughout?

When the laws by which the motions of the heavenly bodies are well known and systematically arranged, why should we despair of medicine one day assuming that rank in the scale of sciences which its dignity and importance so imperiously demand?

In our times this is neglected, and we have abundance of speculation; but, alas! little accurate knowledge, of the real nature of disease.

If any internal part suffers pain, how can he know what the nature of the disorder is, who is ignorant of the morbid changes which the viscera undergo? or how can a cure be effected by him who knows not what part is diseased? Nor can we admit it to be cruel, as many assert it to be, to promote the welfare of mankind in general by the destruction of a few animals.

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CASE IN WHICH

A FOREIGN BODY WAS LODGED FOR NEARLY EIGHT MONTHS IN THE ANTRUM.

By J. M. ARNOTT, Surgeon.

In the month of September 1824, I was consulted by a lady who had had discharge of a yellow, occasionally somewhat fetid matter from the right nostril, for the last six or seven days, attended with pain in the cheek and corresponding side of the head. She had experienced feelings of uneasiness in the cheek during the preceding fortnight, which she attributed to having taken cold, as she believed her teeth to be sound. The matter coming from the nostril was puriform and thick, and was discharged at intervals; occasionally, more especially on awakening, she was sensible of its presence also in

the throat. No ulceration of the mucous membrane of the nostril was perceived. There was no increased redness of the right cheek; perhaps it was somewhat more tumid than the left. A small spot of caries was detected on the last grinder but one on the right side of the upper jaw: this tooth had never occasioned her pain, and striking it did not produce any; it was the only unsound tooth in the mouth. I had it extracted, and no communication existing between its socket and the antrum, three days after I drilled a hole, with a straight trocar, through the osseous partition into the latter cavity. On withdrawing the instrument its point was found smeared with purulent matter, but several hours elapsed ere this began to issue through the newly-made passage: when the first, perhaps somewhat thicker portion, had passed, it continued to flow freely.

After this the discharge from the nostril ceased, and as the patient was called into the country, it was resolved to try what effect a dependent and ready aperture for the matter might have in remedying its morbid secretion. A piece of bougie, used as a stopper, and which, for the first two days, had been introduced only during meals, was now directed to be worn, but to be taken out several times daily, to allow the evacuation of the discharge.

On the patient's return from the country in a few weeks afterwards, I was informed that the discharge had at first diminished, that it then became almost stationary, and had for some time continued nearly so; that the retention of the piece of bougie had been difficult, its presence in the mouth inconvenient, and that it had not, therefore, been constantly worn. I now determined upon introducing a silver canula, and, after repeated trials with various ones made expressly and differently formed, a tube was met with, which entering easily, remained in its place without artificial fastenings, occasioned no inconvenience, allowed a ready passage for the discharge, and could be taken out and reintroduced with facility. This was inserted on the 6th of Nov. and left to be worn in place of the bougie, its lower aperture being stopped with cork. Injections were now resorted to, at first of warm water, and subsequently of solutions of various astringent substances; these thrown

into the antrum passed freely into the nose. Solutions gradually increased in strength, of sulphate of zinc, of oxy-muriate of mercury, and of nitrate of silver; decoction of oak bark, and port wine and water, were employed, but without permanent advantage. Sometimes the discharge lessened under their use, occasionally it increased and was attended with pain, but more commonly their effect was nugatory.—Finally, after having endeavoured for more than two months to arrest the discharge by means of these local applications, they were discontinued, and the patient contented herself with washing out the antrum twice a day with water simply.

On the 7th of April last I was sent for by this lady, whom I found in a state of great alarm, from the following occurrence:—The discharge from the antrum had continued much as usual, but of late she had imagined that the silver canula was the cause of an unpleasant taste in her mouth, and mentioning this opinion to a female friend the preceding evening, this lady observed, that a piece of the pipe of the bone syringe which was used for injecting would make a very good tube, and occasion no disagreeable taste. The suggestion was inconsiderately acted upon as soon as made—a portion of the pipe of the syringe was cut off and substituted for the canula, but being unprovided, like the latter, with a rim at its lower extremity, it passed within the passage, and the alarm of the friends being excited, they made various and repeated attempts with bodkins, pointed scissors, &c. to extract it, but in vain. These attempts only served to push it further upwards, and it ultimately disappeared. Ashamed of their folly, it was only after having passed a disturbed night that the patient determined on sending for me.

On examination, I could not discern the piece of syringe pipe in the passage—it had passed fairly into the antrum. I could not, however, with the probe satisfactorily detect it there; and this, with its presumed length (three quarters of an inch), which on the moment I thought too long to allow of its turning, led me to suppose it could not have gone in; but a correct estimate being taken of the height of the antrum, the former circumstance was readily accounted for, by the limited extent of that cavity,

which it was possible to reach with the probe passed in through a small opening in the alveola; whilst the clear statement of the patient, the increased redness of the gum and cheek, and the great anxiety evinced for the extraction of the piece of pipe, dispelled any doubt of its having got within the antrum. The only mode of removing it was by trephining the walls of this cavity, but which I considered too severe an operation to have recourse to under the circumstances. The patient was informed of this, and that I should defer it until the appearance of more urgent symptoms. She was recommended merely to keep quiet, and her apprehensions of the consequences were endeavoured to be tranquillized by the assurance that the piece of bone might remain for a long time in its present situation without producing much mischief, and that it might possibly find its way out, of which, however, I acknowledge that I had little hope. The uneasiness which was felt in the cheek seemed to have been occasioned by the attempts at extraction—it subsided in a day or two, as did an increased quantity of discharge which had taken place. In the meantime, having procured an ivory tube of the same dimensions as the silver canula, it was introduced in place of the latter, and its use was unattended by the unpleasant taste attributed to the metallic one.

Contrary to what might have been expected, the abode of the piece of pipe in the antrum was not followed by any well marked effects. There was no pain, redness, or swelling of the cheek. The general character of the discharge remained the same; it was puriform and white; occasionally it increased, with slight fetor and yellow color, and some uneasiness in the part, but these changes had also occurred previously.

The patient was accustomed to remove the tube every morning and evening, to wash out the antrum, which she had now acquired the power of doing without using the syringe, by merely filling the mouth with water and forcing it to pass up through the passage into the antrum, from whence it entered the nose. On one of these occasions, in July, as she was taking a mouthful of water for this purpose, she felt something in the aperture of the passage in the gum, which she withdrew, and imagined to be a bit of old linen. I

found this to be a small piece of bougie, partially unrolled, with some of the composition off its surface; and as none had been employed since the adoption of the silver tube, this must have remained in the antrum since the preceding October. The patient had been unconscious of its entrance; and could only surmise that it had been forced up by the pressure of the bolus of food during mastication, which might readily have occurred; for, as has been already stated, she had experienced great difficulty in retaining the bougie in its place; and in the country, where she had been obliged to use some of a smaller size, the piece had frequently dropped out during meals, and been swallowed.

The descent of this body naturally encouraged the patient to hope that the piece of pipe might come down in the same way; but after the lapse of some months this hope was almost abandoned, when, on the 27th of November, as she withdrew the canula, some substance followed in the passage, which, projecting from the aperture, she drew out. This proved to be the piece of syringe pipe which had entered the antrum on the 6th of April. With the exception of being darkened in color, and the loss of its polish, this piece of bone had undergone no change; it measured almost seven-eighths of an inch in length. The accompanying drawing offers a correct representation of its form and size.



From this time the discharge from the antrum quickly subsided. At the end of ten days it had ceased; and the canula, when now kept in three days continuously, and then withdrawn, contained no morbid secretion. The employment of the canula is continued for a short time longer, that the patient may satisfy herself of the complaint being permanently cured.

It will have been noticed in the details of the above case, which I have related from its singularity, that it was difficult to retain a piece of bougie as a stopper in the opening which it was intended to close; and the patient, of her own accord, had tried cork, which was equally so. It was necessary to wear a stopper of some kind,

as the opening in the gum showed a great tendency to close; requiring, on her return from the country, that the trocar should be re-introduced to enlarge it. In resorting to a silver canula, the patient objected to this being attached by fastenings of any kind to the adjoining teeth; and an endeavour was therefore made to effect its retention by some modification of the form. But after trying several, a simple canula, of the form here represented, was



found to answer every purpose. This was of a size to fill the aperture made by the trocar; and when introduced was held in its place by the pressure of the surrounding gum sufficiently firm to prevent its falling down; and the rim, at its extremity, being thereby kept close to the gum itself, it offered no projection to be caught by the tongue or food. An ivory canula is preferable to one of silver from its lightness. In this case, after having been worn some time, the metallic one fell partly out from its weight, a circumstance which never occurred during eight months with the other.

New Burlington Street,
Dec. 17th, 1829.

P.S. I observe that the cut representing the ivory canula is considerably smaller than that which is employed, viz. narrower.

PRIZES AT THE LONDON UNIVERSITY.

To the Editor of the London Medical Gazette.

SIR,

AN early insertion of the following observations in your valuable journal, will much oblige

A UNIVERSITY STUDENT.

There are few principles of the hu-
109.—v.

man mind stronger in themselves, or more easily wrought upon, than ambition. To stand lowest in the scale of merit is dreaded by every one of spirit, as disgraceful; while to be foremost in the race is, to a well-constituted mind, one of the dearest objects of pursuit.

The directors of the University of London, like those of many other great public seminaries, anxious to reward the most diligent and meritorious students, and desirous of exciting all to arduous study and a love of science, encourage ample competition by prizes and certificates of merit. But with regard to the plan which is adopted for their distribution, we cannot help remarking with regret, that it is calculated, in no slight degree, to prove injurious to the greater part of the students. The grounds on which we make this assertion are—that students of very different and unequal acquirements are urged into the same competition—that he, who has been enrolled but a few months, is enlisted into the same band with him whose education is nearly finished—that a raw and unformed recruit is made to bear arms as heavy, and enter upon a contest as arduous, as a hardened veteran, who has lived his life in armour—that, in short, no distinction whatever has been made between those students who have but a short time before commenced their studies, and those who are advanced to the highest point of information.

Now, we contend, and trust satisfactorily to show, that such a mode is ruinous to all spirit of emulation and ardent study among all classes of students; that to the young and uninitiated it presents an object for competition hopelessly above their reach; and that to the old and accomplished, it furnishes nothing worth the occupation of a mind which should aspire to higher and more dignified pursuits. The latter *should* feel themselves above the prize; the former *must* feel themselves below it. To the one it is too high for attainment; to the other it ought to be beneath competition;—to neither, consequently, it can form an object worthy of pursuit. Beneath the advanced, and above the junior student, it is equally unfit for both; while it only tempts the latter to waste his time and talents in a hopeless chase, it is an inducement to the former to engage in a contest where

success must be regarded more in the light of vanquishment than victory.

We are well aware that in this undertaking there are some who will tax us with presumption, and a meddling spirit; to such objectors we shall merely reply, that, when the rights and interests of our fellow-students are encroached upon—where matters important to their welfare are injudiciously arranged, we shall never shrink from endeavoring to protect, and as far as in us lies, to effect their good, and at the same time uphold the dignity and honor of our *Alma Mater*.

As an illustration of the present mode of competing for prizes, we shall now draw the following sketch, and then consider the effects which such a mode is calculated to produce.

If eight students, two of whom have been attending lectures for four or five years, and the rest but for six or twelve months, be brought into competition for a gold and silver medal, together with some written certificates of merit, all of which (certificates) impart the same degree of honor, without reference to their several qualifications, and without estimating the time which has been employed by each in attending lectures, what hope, what chance of success, can the six junior students enjoy, although they may have even had the fatigue of laborious study since the time they commenced? It cannot be denied that any one of the six may be superior in intellect and attainment to either of the two, and that had all been started upon equal grounds to compete for an equal prize, the issue of the contest might have been very different. But here are six students of one year's standing, and two students of four or more years' standing, embarked together in the same enterprise, encouraged by the same object, and hoping to be crowned with the same honor! How heavy and hopeless to one party such an undertaking must in general prove it is easy to anticipate, and how unequal and degrading to the other it is not more difficult to guess. It is obvious that by this plan the merest driveller may obtain a far higher reward than he whose rapid and splendid progress has justly gained him the esteem and approbation of all; and it is not less certain, that the young aspirant has every reason for deserting the

undertaking with mortification and disgust. The one gains what long and labored application has procured for him; the other loses what his high, but single-handed genius, should have gained. Stupidity and idleness stand thus in a fair way of being fed by reward, while talent and industry have as good a chance of being starved by disappointment.

But it may be said, is not the written certificate of merit a sufficient compensation to the junior competitors? We answer, certainly not; for should his senior carry away the golden prize, it imparts no more honor to him whose production comes next to the medallist, than it does to the one who has just answered a sufficient number of questions to entitle him to a certificate. In order to show that the foregoing remark, "two of whom have been attending lectures three or four years," does no more than express the qualifications of some of the competitors, it is requisite to state, that there are many students who have not merely attended lectures for that period, but also *hospital practice* and *dissections*, in the various schools at Manchester, Liverpool, Leeds, and other towns. Yet these are permitted and entitled to compete with a youth in his first session!

Diffidence has always been characteristic of a youthful mind, and if it should meet with no encouragement in its pursuit of knowledge, it must be obvious that all progress in science, and spirit of inquiry, to say nothing of emulation, will be checked, nay, even in some instances, destroyed. And, that the present obstacles have in no slight degree that effect, or at least are calculated to prevent many a highly-gifted mind from entering on a contest which might otherwise have engaged it in arduous study, cannot be denied; for it is consistent and agreeable to common sense to affirm, that such a competition can only be looked upon by the junior student as a delusive farce, or an *ignis fatuus*, which may be for ever followed, but never reached.

Encouragement, fair play, and reward, are what every diligent and meritorious student is deserving of, whether he study for one, two, or twelve years; and we would here urge, that those young men who have not either time or money to expend beyond the

period of two years, (which is the circumscribed time of the majority of the students,) have not the least gleam of hope, or shadow of a chance, in such a contest.

The next point to which we now think it necessary to advert is, the effect of this mode of distribution upon far advanced students. From all the foregoing statements and considerations it must be manifest, that they, in ninety-nine times out of a hundred, must be the successful candidates; loaded with honors, not obtained by genuine merit, nor in a competition where they had to contend with men of their own standing, but rather wrested from very unequal competitors. Buoyed up by their own conceit and self-esteem, they will be led to conceive that they know enough for the purpose of pursuing their profession; immediately then they launch into the world with all the confidence of experienced men; but, alas! how soon do they find themselves mistaken, for that vanity with which they are imbued, soon drives them to that excess which makes them very unsafe characters to society, and brings on consequent disappointment to themselves. Then they will have reason to look back with sorrow on that time which has been spent in the acquisition of trifles, and which ought to have been employed, at their period of life, in storing the mind with real practical knowledge, and in preparing themselves for faithfully discharging the vital and important duties which will shortly devolve upon them as general practitioners. To wrest a trifling medal, or a more trifling book, out of the hands of him who ought to have it, is a mean and despicable victory, and must be a wretched preparative for great and worthy deeds of coming days. The wonders of Hercules had never been recorded, if the monsters he defeated had been beardless youths, or the labors he accomplished had been children's play. Where there is no opposition there can be no victory; and where there is no danger of defeat, there can be little stimulus to exertion. The senior student engages in a warfare where he may be annoyed, but can seldom be overcome; and the junior is employed merely as the foil for setting off his elder brother's prowess. We do not wish it to be understood that we are averse to their contending for prizes: by

no means; but let the competition be of such a nature as to call forth their utmost exertions and talents, and such as will ultimately tend to produce an infallible good, not only to themselves but to society.

They ought to be ashamed of wresting from their junior fellow-students honors which are calculated to incite them to persevering industry, and consider that the noblest of all rewards, as well as the most satisfactory, is the well-merited approbation of their own consciences.

It remains now only to point out by what means these defects may be obviated, and that this subject is attended with some difficulty we are well aware, but still trust to be able to propose a plan which will, at least, diminish the baneful effects of the present system.

[To be continued]

FEE TO MEDICAL MEN FROM ASSURANCE SOCIETIES.

To the Editor of the London Medical Gazette.

SIR,

THE subject I am about to write upon is not worthy to occupy much of that space which can be better bestowed upon such scientific discussions as are calculated to improve and gratify the numerous readers of your Journal: but since you have, in a recent communication*, given to the public one side of the question, "as to whether a fee should be required for certifying concerning the state of health of a proposed insurer," it may be well to hear the other side. I shall, therefore, offer you my sentiments, engaging, at the same time, not to enter into any very lengthened controversy to uphold them.

Life-insuring is now become so common a practice, that I do assure you, placed in a large city, and in great employment, I have felt it a heavy task to answer all the applications made to me, and have expressed my dissatisfaction whenever I have failed to gain the required fee for my services. I consider that the opinion a medical man gives on

* See a Letter, signed F. R. in No. for 14th November.

such occasions is strictly professional, and that he is answerable for its correctness. It is all very well that a parson or a lawyer should certify gratuitously respecting the health of a neighbour or an acquaintance; so will I certify of his moral conduct or respectability of station. But will the lawyer expect nothing for writing a letter upon a point of law? It is not in my experience to hear of gentlemen of the law doing much gratuitous service in their own calling.

When I sign a certificate for or against a life-insurance, I examine the party from head to foot, and feel responsible for the correctness and impartiality of my statement; and I conceive that if I were to overlook an aneurism of the aorta, or a diseased liver, in a person who believed himself in health, I might afterwards be brought to account for it in a court of justice, when my own document might appear against me, it being the habit of all insurance societies to file the certificates they receive from medical men.

I confess that whenever the secretary of an insurance office obtrudes upon me one of his proposals, with a long list of queries, most difficult to be answered, I am annoyed at the liberty taken; and on one occasion, when I personally remonstrated with a very wealthy office, I was told, "were my wishes universally complied with, it would make a difference of eight hundred a year in its finances!" a sufficiently strong argument that the medical profession is unjustly treated.

I see no difficulty in marking out a plan by which the purpose I advocate could be accomplished. Let every person who proposes to insure his life be required to pay one guinea on making application, which will prevent persons from trying one and another office without being fully determined to engage with any. The office, thus secured, ought to enclose a fee to the medical man to whom reference is made; and this is not only the proper, but the sole secure channel of a fee coming into our profession. Thus a serviceable check will be given to the public; wealthy institutions be relieved of the unworthy custom of asking favors at our hands; whilst the practitioner, receiving a fit remuneration, will know that he is accountable for the correctness of each professional statement.

The time is gone by for appealing to

our charitable feelings to encourage life-insurance. It is so good a measure on the broad and general view, and its advantages are so generally appreciated by an enlightened community, that we overrate our influence in supposing it would receive any check from the refusal of our gratuitous services. This, and many other arguments of your correspondent, are so untenable, and so inapplicable, both to the medical profession and the present state of society, that I doubt not you will have to choose out of numerous communications, and therefore I beg that mine may remain unnoticed, unless it seems, in your judgment, to compress the principal points of this question into very few words, which is the wish of, Sir,

Your obedient and faithful servant,

J. C.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abrégé."—D'ALEMBERT.

Hospital Facts and Observations, illustrative of the Efficacy of the new Remedies—Strychnia, Brucia, Acetate of Morphia, Veratria, Iodine, &c. in several morbid conditions of the System; with a comparative view of the Treatment of Chorea, and some cases of Diabetes. A Report of the Efficacy of Sulphureous Fumigations in Diseases of the Skin, Chronic Rheumatism, &c. By JAMES LOMAX BARDSLEY, M.D. Physician to the Manchester Infirmary, &c. &c.

We have long been accustomed to witness new remedies ushered into notice with high eulogiums on their efficacy by those who have first extensively employed them. They are either to be infallible in some one disease, or if the author be sufficiently enthusiastic, they are to prove of universal application, and all-powerful in the treatment of every malady to which the human system is liable. Indeed, so much are we in the habit of viewing things, not as they really are, but as our feelings and desires paint them, that many most scientific and able writers have filled volumes with the detail of experiments

and observations that have since been completely contradicted by experience.

It is in this way that from time to time we hear of a new and wonder-working remedy. Books are written upon it; its successful application is every where reiterated; it is tried in every thing, and often applied at random, without thinking it necessary to pay attention to any of the peculiarities of the cases. The necessary result is, that after using it until their patience is exhausted, generally without success, many give it up in disgust; and the remedy, which but a few months before was to possess the virtues of the whole Pharmacopœia, and what is still more valuable, supply the judgment required for its proper administration, is now cried down as zealously as before it was lauded. Proving that

*"Fashion, though Folly's child, and guide of fools,
Rules e'en the wisest—and in Physic rules."*

For another remedy succeeds the last, and runs precisely the same course, its final estimation being generally proportioned to the greater or less enthusiasm with which it was first spoken of.

We opened the volume before us prepared to find an account of some of the wonders of the day—some of the giants of the season; and were agreeably surprised by finding it a clear and able detail of the author's experience in the use of remedies already known to the public by the labors of many eminent men at home and abroad, as agents of great power. We are indebted to Dr. Bardeley for having judiciously applied this power, and giving the results to the public with a degree of candour and moderation which render his observations of real value, since they carry conviction to the reader's mind of their fidelity.

The principal part of the volume is occupied by observations and cases, illustrative of the medicinal properties of strychnia in paralysis, chronic diarrhœa, and amenorrhœa; of brucia in paralysis; and of the acetate of morphia in some painful affections of the stomach, in cases of uterine disease and neuralgia. The remainder contains experiments and observations on veratria and colchicum autumnale; on the virtues of iodine in bronchocele. There are also several cases, illustrative of the author's views in the treatment of chorea and diabetes, concluding with a report

on the efficacy of sulphureous fumigation in diseases of the skin, chronic rheumatism, &c.

The strychnia was employed in thirty-five cases of paralysis, and with very great though not uniform success. In one or two cases it appears to have failed entirely; but of the others the majority have been cured, and the remainder considerably relieved. The treatment generally adopted has been to purge the patient freely for the first week or ten days, and to apply leeches and blisters to the head when there was much pain in that part, and then commence with the strychnia, in the dose of one-fourth or one-sixth of a grain, every six hours, in the form of pill, made with the conserve of roses, gradually increasing the dose, watching its effect upon the patient. The following observations give the principal results of the author's experiments on this agent.

"It is in such cases of paralysis as seem to arise from diminished nervous excitement that the strychnia is particularly indicated. It may be stated here, as a rule of guidance, that whenever hemiplegia supervenes to an apoplectic seizure, in persons of a plethoric habit, it is proper to employ bleeding, purging, and the ordinary antiphlogistic treatment, before resorting to the use of the strychnia. When the vessels of the head have been freely unloaded, and the quantity and force of the circulating fluid diminished by the above means, there can be little objection to a cautious and prudent trial of this remedy. Generally speaking, the strychnia is likely to prove more serviceable in paraplegia, unconnected with spinal disease, than in hemiplegia; though I feel confident that it will not unfrequently be found an important remedial agent even in hemiplegic paralysis."

In the cases of chronic diarrhœa, the employment of strychnia has been attended with the most beneficial results. Our author says—

"I do not consider the strychnia a suitable remedy in those instances of diarrhœa which depend upon an evident inflammatory condition of the mucous membrane of the intestines; but I more particularly recommend it in cases of a chronic kind, occurring in persons somewhat advanced in life, and of feeble constitution."

This remedy is, in fact, only recommended as deserving of attention when

those medicines which are generally resorted to have failed; and as it exerts a beneficial action on the stomach, by restoring its tone and powers of digestion, it appears well calculated to afford relief in those obstinate cases in which it is here proposed.

Strychnia appears also to be useful in the treatment of amenorrhœa. Of twelve cases in which it was tried, only two were not cured, and even these were relieved. Dr. Bardsley attributes its virtues to the power which it possesses of stimulating the vessels of the uterus, and of improving the tone and vigour of the system. He recommends the conjoint exhibition of mild laxatives in these affections.

The following paragraph, at the same time that it will give our readers the author's opinion of strychnia in the diseases in which he has employed it, will also shew the candid and very moderate manner in which he treats his subject.

"Such are the results of my experiments with strychnia, which are calculated to set forth the *real* claims of this alkali to the notice of the profession, as a remedy in certain diseased conditions of the system. I think that I may venture to draw from them the two following conclusions. First, that strychnia, *cautiously administered*, is a safe and useful remedy in paralysis. Secondly, that it will occasionally be found serviceable in *chronic diarrhœa* and *amenorrhœa*.

Illustrative of the medicinal properties of brucia, and its action on paralysis, we have a number of cases, the results of which seem to shew that it is a useful remedy, though less powerful than strychnia: but the author prefers it to the latter in all paralytic attacks accompanied with much cerebral disturbance. The dose, at the commencement, is one grain twice a day, which may be cautiously increased to two, three or four times in the day; and if this does not produce a marked advantage, it may then be laid aside. Dr. Bardsley has tried the acetate of morphia in a number of cases of painful affection of the stomach, in uterine diseases, and neuralgia, with great benefit. Those cases in which its use is detailed are particularly clear and conclusive. It seems to act more beneficially than opium, and without the usual deleterious effects of that medicine.

"I am led to recommend the acetate

of morphia in preference to opium, from a conviction that its efficacy may be equally relied upon, whilst its administration will be unattended by the distressing head-ache, excessive constipation, and other unpleasant symptoms which that drug, in large doses, mostly induces. It appears to be the chief advantage of morphia that it may be employed in those cases in which it is desirable to obtain a narcotic effect, and at the same time of the first importance to avoid constipation." The first dose should not be more than a quarter of a grain, which may be gradually increased to two grains, according to the urgency of the symptoms.

Some good observations follow, on the use of veratria and colchicum autumnale, in chronic rheumatism; on iodine in bronchocele and scrofula; on cinchonia and sulphate of quinia, in intermittent fever: the general result of the cases is favorable. Also a comparative view of the remedies of chorea, and the treatment adopted by the author in diabetes, and the efficacy of sulphureous fumigations in many of the diseases of the skin. Of emetina we are told, "in the dose of five grains, dissolved in two or three ounces of rose-water, it has proved an active emetic; in the proportion of half a grain, every five hours, it has acted as a mild diaphoretic; and in the dose of a fourth of a grain, every three hours, as an expectorant. It has produced these effects with great certainty. In some instances of *dysentery*, *chronic diarrhœa*, and *chronic pulmonary catarrh*, I have derived from the emetina, in combination with a small proportion of opium, much benefit*. I have generally used it in the form of a pill, with a small quantity of aromatic confection. My trials with emetina do not lead me to recommend it as a substitute for the ordinary powder of ipecacuanha, except as a remedy for children, and in certain cases of idiosyncrasy in which the effluvia of that drug is found to occasion highly pernicious effects." With regard to gentiana, the author does not think it calculated to supersede the ordinary preparations of gentian;—he says it has no tendency like this to keep the bowels open. Though these

* It may be proper to observe, that in these cases the impure or colored emetina was employed.

"observations" contain little that is absolutely original, they abound in practical information, though not of a nature fitted for analysis. We conclude by recommending this volume to the attention of our readers, as one that will amply repay the time that may be devoted to its perusal.

MEDICAL GAZETTE.

Saturday, January 2, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicere, quod periculum non recuso."—CICERO.

LAW *versus* PHYSIC.

THE commission which has just concluded its protracted labors, and given its decision, in the case of Mr. Davies, adds another to the many proofs of the uncertainty which attends all inquiries of this nature dependent on medical evidence. We have formerly expressed our opinion, and it remains unchanged, that medical men are somewhat too easily satisfied that an individual is insane; while others, deceived by the calm of a lucid interval, or the cunning concealment of his malady by a madman, who is aware of the purpose for which he is examined, are often led to regard as of sound mind persons laboring under the most decided and confirmed lunacy. In illustration of this, we alluded, on a former occasion, to the case of a clergyman who was declared by those about him to be mad, but whom the Court, guided by his answers when examined before them, declared to be sane. He deliberately burnt a valuable theological library; but assured the Court, with all the plausibility of reason, that he had done so because he had found that controversial divinity was "the vainest of all vanities," and that, as a conscientious man, he could not expose others to that which had been a source of per-

plexity and suffering to himself. The Court admitted his reasoning, and admired his virtue. But he had had a large and well-stocked orchard, from which he derived no inconsiderable income. This he had suddenly attacked, destroying every tree and digging up the soil. This, again, was suspicious—but hear his explanation. "My health, (said he) required exercise; and digging, I had heard, was the best. I converted my orchard into a garden; but finding that nothing would grow under the shade of the trees, I cut them down." The Court looked upon him as more rational than those who held him to be mad, and forthwith dismissed the cause. Within a fortnight he was a raving maniac. This, no doubt, is an extreme case, but approximations to it are not rare.

The law, however, as observed by Jekyl, "will not measure the sizes of men's capacities;" and every day's experience must convince us all, that if every man who was a little idiotic, or a little mad, were to be considered as *non compos mentis*, we should soon lack commissioners to sit in judgment on such cases. But between the extremes, the links in the chain of intellect are numberless, and it requires no small skill and judgment to determine how mad or how idiotic a man may be without being deprived of his privileges as a free subject; and how mad or how idiotic he must be, to warrant so heavy a visitation as loss of control over his person and his property. What is that state of mind which constitutes *non compos mentis*? So undefined seem the requisites of this condition, that scarcely two authorities take identically the same view of them; and we know not that any better definition is to be found than that of Polonius:

"To define true madness, what is it but to be truly mad?"

There are, however, two general sets of

opinion distinctly observable, — one class of persons requiring too much — they are the lawyers; the other being satisfied with too little — and they are the doctors.

It is quite obvious that a man is not to be deprived of his freedom, or privileges, on account of mere oddities, or absurdities, however they may be at variance with the opinions of the generality of mankind; nor, indeed, that any thing short of some *permanent* delusion dangerous to himself or others, can warrant the issue of a commission of lunacy against him. In determining what is dangerous to the interests of an individual, as regards his property, one would suppose that such mental imbecility, either congenital or acquired, as prevents a man from being able to make the commonest and simplest calculations in arithmetic, would be sufficient to warrant the Chancellor in taking the property under his care: yet Lord Hardwicke thought this an insufficient ground for issuing a commission in the case of Lord Donegal, although he could not answer the commonest question about figures. With regard to memory, again, it was decided too, by the Lord Chancellor Kent, that no degree of its failure short of that which was total, extending to the immediate members of a man's own family, was sufficient to constitute incapacity. With regard, indeed, to mental weakness, if it be unaccompanied by derangement, there seems scarcely any extent, short of absolute idiocy, which it may not be suffered to go, without excluding the individual from his place in society. But when we turn from mere imbecility to derangement, the limit is much more contracted, though its exact boundary even here is scarcely to be defined. A man may be decidedly mad on particular subjects — there may be certain topics on which he cannot discourse without betraying a derange-

ment in his faculties of apprehension and judgment; yet, on all other points, he may be rational; and if the particular point on which his mania hinges be one on which none of his social relations turn, it would be obviously cruel to deprive him of the control over himself and his affairs.

It is recorded by Marcellus Donatus, that a baker, of Ferrara, imagined himself a lump of butter, and he durst not sit in the sun or near a fire, lest he should be melted; and it occurred to ourselves to know of a gentleman who supposed his "nether bulk" was made of glass, and who never sat down without great caution. But such delusions, though permanent, interfere not with the safety of the individual, either as respects his person or his property. There may be delusions which do interfere with one or both of these, yet which are not permanent, and therefore which no more warrant a commission of lunacy than does the delirium of fever; for a man may have such an attack once and never again. The existence of such a circumstance gives rise to the exercise of control over the individual just on the same principle as this is adopted in acute delirium. But there are two conditions essentially different from this, in which the question is not so easily decided, as to either the expediency or legality of imposing restraint. These are where the delusion is of a nature which renders it difficult to say whether it does or does not bring the person or property of the individual into danger; or where the delusion is obviously dangerous in these respects, but is attended with such considerable intervals as to make it matter of reasonable question, during one of these, whether the recovery be not permanent.

Yet another circumstance remains which may give rise to a question as to the sanity of an individual: — when an

impression received during insanity is acted upon afterwards. Thus a gentleman, while insane, imagined that his brother had given him poison: from this attack he recovered, and practised his profession, that of the law, with great clearness of judgment; yet he disinherited his brother on the ground of the suspicion originally conceived during his madness, and for which there was not the slightest grounds. What then are we to say of such a case? Was the permanency of this impression, after all other symptoms had disappeared, sufficient to prove that the insanity had never ceased to exist, and, consequently, that the will was void? or was the existence of such a delusion, originally the offspring of insanity, to be regarded as not incompatible with soundness of intellect; and, consequently, the will to be held good? A jury, guided by Lord Kenyon, found the will good; but in another court the jury found against the will. Let not the lawyers, then, taunt the medical profession with the contrariety of opinion among them upon these—the most doubtful of all questions connected with medicine. We have not to go far ere we find another profession yet more uncertain, though avowedly resting on mere precedent and recorded authority; and not as ours, on reasoning, founded on data, which too often are unavoidably imperfect.

In the particular case which has been the subject of this commission, that Mr. Davies was of unsound mind when he consulted Mr. Lawrence and Dr. Latham, is perfectly obvious. Indeed, according to the account of the former, he then also labored under unequivocal signs of “physical derangement.” His incoherence; the practice of going on his knees to his medical attendant; his violence; his carrying a pistol, and actually presenting it at one of the clerks at a banking-house; his extraordinary

intercourse with the Deity, and his inspiration, “which he could feel at the tips of his fingers,” are quite sufficient to set that part of the question at rest, and fully to justify those who, like Dr. Latham, certified their “apprehension of his possible insanity.” Had this been the object of the inquiry, its result must have been just the reverse of what has occurred; but when it was attempted to be shewn, not only that this gentleman had been, but that he was, and was to be in the same state to the end of the chapter, and that his person was to be subjected to permanent restraint, and his property to the entire management of others, we must confess, that even with the story of the clergyman, with his library and his orchard before us, we do not see how the commissioners could come to any other decision than they did. Certainly no permanent delusion, incompatible with the management of his affairs, seems to us to have been demonstrated; and, indeed, the evidence generally conveyed the impression of men endeavoring to establish a particular point, and to make good their own side of the question; not to enable the commissioners to judge whether Mr. Davies was insane or not, but by every means to convince them of the affirmative. This appears to us to have been very badly managed by Sir Charles Wetherall. Throughout the whole inquiry, he and his witnesses seemed contending, not for truth, but for victory. As to the evidence of the medical witnesses, it was, with a few exceptions, wretchedly bad. In some instances it was absolutely imbecile; in others pompous, vulgar, and absurd. We cannot compliment Mr. Adolphus on the chasteness of his own style of oratory, but his impatient appeal against Dr. Haslam being allowed to stand “spouting such rubbish,” though sufficiently coarse, was perhaps no

more than he deserved. Mr. Brougham, who was by no means complimentary to any of the doctors, observed of the same witness, that he "displayed a judgment infinitely more perverted than all the rest of the medical men put together!"

Here we must close our remarks for the present, but we shall probably resume the subject next week.

MR. M'CHRISTIE AND HIS CHALLENGE.

It has for some time been apparent that it was impossible for the *Lancet* to maintain any longer the system of delusion which it successfully practised for some years. It became necessary therefore to get up something new and striking, to attract the public eye, and produce an imposing effect upon its readers. An effort was accordingly made last week to accomplish this, by one of the reporters doffing the only character in which he had heretofore been known, and appearing on the stage in a new capacity. We subjoin the account of this absurd affair, sent to the *Gazette* by Dr. Macleod.

To the Editor of the London Medical Gazette.

SIR,

ALTHOUGH, for the most part, such intrusion is impertinent, yet there are circumstances under which it may be expected by others, and due to himself, that an individual should make the public acquainted with certain occurrences which have befallen him, as well as of the motives by which he has been guided.

To those who have attended to the state of the medical profession during the last few years, and more especially since I obtained a verdict against the Editor of the *Lancet* for libel, it cannot be necessary to remark on the relation in which I have stood to that publication. Except, however, the weekly visitation of its abuse, no farther attempt was made to involve me personally with any of its agents till last week: and this leads me to observe that Mr. Earle, about a month ago, addressed a letter to the Editor of the *Lancet*, which, at the end of three weeks,

drew from Mr. M'Christie (one of the reporters to the *Lancet*) an answer contradicting some of the most important statements of Mr. Earle, and placing that gentleman in a light equally ridiculous and contemptible. In the number of the *Medical Gazette* which followed, a contradiction of Mr. M'Christie's assertions appeared, on the authority of Mr. Earle. The publication took place on *Friday*, the 18th, at two o'clock; and on the following *Tuesday*, at six in the evening, a person called upon me, who sent his name as "Mr. Mills," and who said he had been requested to deliver a letter to me. It was addressed simply "To Dr. Macleod," and ran as follows:—

"Mr. M'Christie considers that Dr. Macleod, in the last number of his publication, has made some remarks involving Mr. M'Christie's veracity, which he cannot permit Dr. Macleod or any other person to publish or utter with impunity. Mr. M'Christie has therefore requested his friend, Mr. Mills, to wait on Dr. Macleod for an explanation.

"Basing-Lane, 22d Dec. 1829.

"*Dr. Macleod.*"

On reading the above, I said—"Sir, the only remark I have to make on this is, that Mr. M'Christie had no right to address this note to me, nor you to bring it."—Mr. Mills then asked—"Are you not the Editor of the *Medical Gazette*?" To this I answered, "Rumour, sir, I am aware, lays it at my door; but you are not warranted in presuming on that."

Mr. Mills rejoined: "It is more than rumour, sir—for Mr. Snow told me so."

"I remember (said I) Dr. Tweedie and Mr. Snow calling upon me, to know if I could procure for them the insertion in the *Gazette* of a paragraph, to contradict something injurious to themselves, which had appeared in the newspapers, and I said that I thought I could do so. But denying, as I do, your right to address me in that capacity, you must excuse me if I decline listening to you."

Mr. Mills continued—"I am directed by Mr. M'Christie, to say that he feels aggrieved by something which has appeared in the last number of the *Medical Gazette*."

I replied, "Very possibly. I am acquainted with the article to which, I presume, you allude; but I think you will find the authority on which the contradiction of Mr. M'Christie's statements was made, is very specifically given. The Editor, I apprehend, does not contradict them on his own authority. I must however repeat, that I will not continue this discussion."

I then walked to the other end of the room and rang the bell, at the same time opening the door and motioning to Mr. Mills

to retire. As I did so, he said—"You deny, then, that you are the Editor of the Medical Gazette?" To which I answered, "I deny, sir, that you have any right to question me about the matter."

Mr. Mills, as he was about to leave the room, said, "Then I shall tell Mr. M'Christie that you had no intention of throwing any imputation on his veracity in the article alluded to."

I here interrupted him by saying, "Your better answer, sir, will be simply that which I have given—that he had no right to send me this note, nor you to bring it."

Mr. Mills then retired, and in the course of the evening I wrote down, as above, the conversation which had taken place.

About midnight, and after my family were in bed, the following letter, dated three hours before, was delivered:—

"SIR,

"I lost no time in communicating to Mr. M'Christie the particulars of the conversation which passed between us at our interview this afternoon.

"Mr. M'Christie, however, considers that the grounds upon which he believes you to be the Editor of the work containing the charges of falsehood, are so unquestionable, that he is forced to the alternative of requesting you will refer me to some friend with whom I may communicate* on the subject.

"I have the honor to be, Sir,

"Your very obedient servant,

"GEORGE J. MILLS.

"23, Kirby-Street, Hatton-Garden.

"Tuesday Evening, 9 o'clock.

"December 22d, 1829."

As none of the many physicians and surgeons who have been insulted in the pages of the Lancet, by the Editor and his reporters, ever, in any one instance, called upon their slanderers for the satisfaction they would have demanded of men holding the rank of gentlemen, I confess that I was not prepared for any such absurdity as a challenge from the hired reporter to a paper, in which scarcely a week is allowed to pass without some calumny against me. The manner in which I received his "friend," however, shews sufficiently the view I took of the subject; and I have only to add, that next morning, having consulted several friends, on whose feelings as gentlemen, and experience as men of the world, I could depend, and having got from the majority advice to send the letter to the police-office, and from all unanimously to treat it with absolute contempt, I wrote to Mr. Mills the following reply:—

"23, Henrietta-Street, Cavendish-Square, Dec. 23, 1829.

"SIR,

"In answer to your letter, I beg to repeat

what I stated last night, that you had no right to call upon me as Editor of the Medical Gazette, even independently of the circumstance of the authority on which the charges against Mr. M'Christie's veracity were made, being specifically given. But were it otherwise, I do not admit that he, or any other agent of the Lancet, (the common receptacle of slander against myself among many others,) is entitled to that consideration which, by the usages of society, is accorded exclusively to gentlemen.

"I am, Sir,

"Your obedient servant,

"R. MACLEOD.

"Mr G. J. Mills."

This letter was transmitted, on Wednesday forenoon, to Kirby-Street, Saffron-Hill, (the residence of Mr. Mills, whom I understand to be son of the printer, brother of the publisher, and apprentice of the Editor of the Lancet), and nothing further occurred till Thursday evening, about 9 o'clock, when two persons called at my house, and asked if I was at home? The servant told them I was, and asked them to walk in. "No," (said one of them, presenting a card); take that to your master. Tell him it is my card; that he is a coward, and a fool, and a liar, and that I shall horsewhip him, and kick him, and strike him, the first time I see him." This message was accordingly delivered to me, in the midst of my family; and on my inquiring whether the persons who gave it were below, the servant said, "No, sir; I asked them to come in, but they would not; and they both walked away as soon as they had delivered the message." The card was Mr. M'Christie's. Of this singular communication I took no notice of any kind, and was reading at the Royal Institution, between twelve and one on Saturday, when a friend came to me and mentioned, that having gone to Henrietta-Street to call for me, he had seen a person armed with a stick stationed a few yards from my door, and Mr. M'Christie with a whip parading on the opposite side of the street. On this intimation I resolved at once to proceed against them as common ruffians, and gave notice at the Police-Office in Great Marlborough-Street. An officer was sent with me, whom I left in Holles-Street, while I walked on before. In Henrietta Street I met another gentleman, who also had been attracted by the ostentatious preparation for an assault, and who was watching to give me notice. I told him not to turn with me, but to walk on, as I was fully prepared. Seeing a person with a large white great coat and whip (by which I was told I should know him, for I had never before seen him) standing on the pavement, about twenty yards from my door, I walked deliberately up to and slowly past him, having in my hand a tolerably serviceable stick, with which I had

* So in the original.

provided myself some days before. Having passed him a few yards, I turned with the intention of passing of him again, but he had thrust his whip into the side pocket of his great coat, and was walking off towards Oxford-Street. This appears so extraordinary that I think it right to state that it was witnessed by two gentlemen who were in the street at the time, and who will vouch for its truth. I followed him, and passed him again, when he crossed over to the other side, and was apparently making the best of his way home; but as I did not choose to be again subjected to a similar annoyance, I went back for the officer, who ran after, and arrested him at the top of Regent-Street. Of his friend I saw nothing, he having decamped. On going before the magistrate I was required to state the above circumstances, and my servant to repeat the message which had been delivered to him by the person in custody. He was then bound over to keep the peace in 200l. and two sureties of 100l. each. One of these was Dr. Haslam, and the other a Mr. Berkley, a warehouseman in Distaff-Lane.

I have only to add, that Mr. M'Christie, on being brought to the Police Office, immediately entered into conversation with the other reporters; a circumstance which sufficiently explains the coloring given to the affair in some of the newspapers.

R. MACLEOD.

Henrietta-Street, Cavendish-Square,
December 28th, 1849.

[We recommend the above to the attention of any one who may find it convenient to be bound over to keep the peace.]

HOSPITAL REPORTS.

GUY'S HOSPITAL.

*Removal of a large part of the Inferior Maxilla, for Fungous Exostosis, by Mr. Morgan.**

J. MAGNESS, æt. 64, of good constitution, and very regular habits, admitted in November.

In March last, the patient first complained of pain about the second molar tooth in the right side of the lower jaw; the gum became loose and spongy, and he had constantly the sensation of foreign matter

lodged between the teeth. The second molar was extracted, being the suspected source of irritation; but it proved sound, and no relief was obtained; a dull pain, like toothache, became fixed in the jaw, and the gum was disposed to fungate.

From this period the disease advanced constantly; in July the bone was found to be exposed, enlarged, and spongy; in August it had formed a tumor within the mouth, which was at first small, and rather hard, but soon enlarged in size, at the same time becoming softer, and involving all the structures around it.

The diseased mass very soon pushed out the cheek so as to be visible externally: presently the skin covering it became inflamed at the most prominent point, and was punctured, but only blood or bloody serum escaped. Having consulted Mr. Bell, he was by him apprised of the dangerous nature of his disease, and advised to have it removed by Mr. Morgan, with which intention he entered the hospital.

On admission, there is an external tumor larger than a hen's egg, situated between the symphysis and angle of the jaw, but nearer the latter. It is so firmly fixed as apparently to form a part of the jaw itself, with which, indeed, its structure is continuous; its firmness is unequal at different points; the surface irregular, and slightly reddened by inflammation of the skin. Examined internally, it presents a mass of fungoid disease, the centre of which is in the seat of the second molar tooth, whence it extends in every direction, disorganizing the gum, muscles, and mucous membrane of the mouth, especially inwards, towards the tongue.

The patient suffers considerable pain over the right side of the head and neck, which is much aggravated by the recumbent position. He cannot sleep unless his head is raised to angle of 45°. He cannot masticate hard food. His articulation is impaired.

Nov. 17.—The rapid progress peculiar to fungoid disease is very manifest, even in the few days of this patient's abode in the hospital. The tumor is strikingly enlarged; and the integuments are inflamed, thinning, and on the point of ulceration. The delay of a few days must produce an open fungus. Mr. Morgan has fully stated to him his danger from the disease, and also candidly explained the serious nature of the proposed operation: to the latter alternative he willingly submits.

Operation.—Patient recumbent; head raised upon a pillow, and the diseased side of the face turned upwards. Mr. Morgan began by making an incision, which commenced under the zygoma, in the central line of the ascending ramus of the lower jaw; was carried obliquely downwards,

* In a former number we gave a brief notice of this operation; we now give the details of the case.

nearly to the angle, and thence curved forwards to the symphysis, where it ended. As it was necessary to remove the diseased portion of integument, superiorly to which this first incision passed, a second incision was carried below it elliptically, joining the first near the angle, and again near the symphysis, thus bounding with the diseased skin the most prominent part of the fungoid mass. In the next place, the scalpel being carried within the mouth, was made to pierce the cheek in the track of the first or upper incision, and by one stroke the cheek and lip were divided in the course of that incision down to the symphysis. This also divided the parotid duct, the transverse facial and facial arteries, to which arteries ligatures were applied. The deeper dissection was now continued, in the course of the previous incisions, at the upper part of the disease, in order to expose the ascending ramus; and the parotid gland and masseter muscle being divided, the bone was brought into view, and by means of Iley's saw, transversely divided, just below the root of the coronoid process; but from the narrowness of the space allowed by the soft parts, the obscurity from blood, and the mobility of the jaw at its articulation, this was the most tedious part of an operation otherwise very rapidly performed. With the same instrument, the jaw was then divided anteriorly; viz. through the socket of the second incisor tooth, which had been previously removed by Mr. Bell. It now remained to detach the diseased mass from the surrounding soft parts; but as these also were extensively diseased, the difficulty became tenfold greater than would have belonged to a removal of the jaw alone. Considerable portions of the gum and lining membrane of the mouth, being disorganized, were necessarily to be removed. The dissection was cautiously pursued from the symphysis backwards, first within the mouth, close to the margin of the tongue, which was violently convulsed during the division of the parts near it. The muscles connected with the jaw were then divided, as close to their attachments as the disease would allow; the submaxillary gland was separated, and the dissection pursued to the ascending plate, until by the division of the internal pterygoid muscle, the operation was completed.

The hemorrhage during the operation was considerable; probably thirty ounces of blood were lost. Small vessels were divided at every stroke of the knife, which deluged the parts with blood; most of them were closed by temporary pressure with the finger. Four only required ligatures;—the facial, the transverse facial, and two irregular branches within the mouth, enlarged by the growth of the disease; the dental was very small.

The patient bore the operation admirably; not a complaint escaped him; and his pulse

remained good. His only inconveniences seemed to be clots of blood in the mouth and fauces, which required that he occasionally raised himself to wash them out.

The bleeding having ceased, the wound cleared of coagula, and every part of it ascertained to be free from disease, its lips were approximated, and secured in apposition by four sutures, and numerous strips of adhesive plaster, lint intervening. The patient was then put to bed in a very tranquil condition, free alike from collapse and from irritation, and with a strict injunction not to speak, or masticate, or take any but fluid articles of food.

18th.—Not a single bad symptom; no bleeding, no pain; had a tranquil sleep in the night; pulse varying from 72 to 84, soft; once or twice a slight cough disturbed him, but it was quieted by a common linctus.

19th.—Perfectly comfortable; pulse 72, rather weak; skin cool; bowels not open since operation.

Ordered—a common enema.

To take wine 3iss. and light nourishment in the form of jellies, broths, &c.

20th.—Dressings changed; wound quite healthy; much of it united by adhesion; no pain; pulse 60, weak; skin natural.

Wine 3iij.

21st.—Wound again dressed; some of the adhesions have given way, so that now only the extremities of the wound are united, and the remainder must granulate.

24th.—One of the sutures removed; lip swollen, wound healthy, system free from any disturbance, no medicine of any kind required.

26th.—Another suture removed; very little separation of the lips of the wound; the lower margin tends to become inverted towards the mouth; discharge puriform, with a deal of viscid mucus.

29th.—The last sutures and all the ligatures but one are now removed; wound healthy, rapidly contracting from each extremity towards the centre. Food escapes from the mouth, and lodges between the lips of the wound, beneath the dressings.

Dec. 5th.—Doing perfectly well; the wound is now about 1½ inch in extent, with healthy granulations. The patient walks about the ward, and begins to converse: a slight diarrhoea has called for the *Mistura Cretæ*; otherwise he is in perfect health. A small part of the integument of the chin has lost its sensibility from division of some nervous filaments, but the functions of speech, deglutition, &c. are not impaired.

The success of the operation is now decided and perfect; should any thing material occur before the man leaves the hospital, we will note it.

M.

WESTMINSTER HOSPITAL.

Tumor of the Breast.

ELIZABETH METCALFE, æt. 52, admitted November 14th, under Sir Anthony Carlisle. She suffers from a large, hard, irregular tumor, on the inner side of the left breast, about the size of a large fist, extending to about the commencement of the mammary gland on one side. It is perfectly moveable, and unattached to the sternum or ribs. Pressure on any point gives great pain, and she suffers from continual darting pains in the breast. On her admission, she complained of great pain in her head, and, a few days after, the left ear began to discharge, which gave her immediate relief. There is also a small tumor on the top of the left forehead, from which some dark coagulated matter was pressed; it is discolored, and presents a slightly ulcerated, ill-conditioned appearance.

She states that, though not very strong, she has generally had good health. She was married at the age of eighteen, but has not lived with her husband, in consequence of his ill treatment, for the last twelve years. She has had seven children. She commenced menstruating at 11 years of age, and ceased two years ago, when she had an ulcerated leg, which troubled her for some time, but was healed after a period, and is now quite sound.

Seven years ago her husband struck her with great violence, repeatedly, on the left breast. She was sick immediately afterwards, and the breast was swelled and much discolored. She felt no further inconvenience from this injury; but last year she perceived a small lump on the inner side of the same breast, which she at first attributed to the pressure of her stays-bone on that part, while following her occupation as laundress. It has since that period gradually increased in size, and become much more painful. She frequently, indeed generally, suffers acutely from shooting pains in the tumor and breast. She has never had any disease of the uterus, or discharge from the vagina.

Nov. 28th.—Sir Anthony Carlisle proceeded to cut out the tumor to-day. The skin was pinched up, and an incision thus made across the breast, and nearly over the centre of the tumor. On dissecting it from the integuments, about an ounce of fluid escaped from a cyst which had been pierced. The remainder of the tumor was solid, but not at all schirrous; it was dissected out with considerable difficulty, being firmly attached to the surrounding integuments; and the cellular tissue was unusually tough, and did not yield in the slightest degree when stretched, so as to shew the precise boundary of the tumor. Two arteries were secured, and the edges of the wound

couple of sutures and strips of plaister. Compress and bandages were then applied, and she was taken to bed.

Sir A. Carlisle made some excellent remarks on the history of the case; and pointing out how imperfect were our means of accurately ascertaining the nature of any disease which we could not actually see, and this case was one in point. Both the previous history and symptoms seemed to indicate the presence of a schirrous tumor, as well as the hard and uneven feel it gave when pressed. But notwithstanding this, the operation proved it to be an encysted, and not a schirrous tumor; and concluded by explaining the cause of the difficulty in detaching the tumor, the unyielding state of the cellular tissue obliging him to dissect each portion carefully with the knife.

8 P.M.—She has been in considerable pain until within the last hour, from the smarting of the wound. She is now easier, and seems disposed to sleep. Bowels open; pulse regular, but rather hard.

Nov. 29th.—She is ordered the following powders.

R Pulv. Rhei, gr. xij.

Sodæ Carb. gr. xiv. et sumend.

Sodæ Carb. gr. xiv. 6tis horis sumend.

The bowels are slightly confined. There is also some fever, and she has passed a very restless night. She complains of great pain in the abdomen, shooting up to the breast, and in the back and loins. She is ordered fomentations to the abdomen, and ʒss. of the Ol Ricini.

Nov. 30th.—She says she has been very freely purged by the castor oil, but she is quieter, and relieved this morning, the pain in the abdomen having left her.

Dec. 1st.—On the dressings being taken off, the edges of the wound were found in apposition, but little union had taken place. There is a very copious and offensive discharge.

Rep. Ol. Ricini ʒij. Haust. Salin. 4tis hor.

Dec. 3d.—One of the ligatures came away to day; and the two sutures were cut, and taken out; the edges remained in contact. Her tongue is clean, and she is free from pain.

Dec. 12th.—She has had a slight attack of fever, which has now entirely subsided. The discharge has diminished; the wound, at the ends, is uniting; and she is altogether doing well.

EDINBURGH SURGICAL HOSPITAL.

Amputation through the Tarsus.

ANN STEWART, æt. 10, entered the hospital on the 4th June, on account of caries of the foot, which had existed two years, in consequence of inflammation induced by the fall of a heavy stone on the instep. There was an opening over the middle cuneiform bone, through which a probe could be passed perpendicularly and transversely in a curved

direction to the head of the metatarsal bone of the little toe, indicating throughout its course the existence of caries. There was considerable thickening of the foot at the part mentioned, but higher up it was quite natural. Amputation of the foot had been proposed, but this I was unwilling to perform, as it seemed that the operation of Chopart could be practised with every prospect of success. Having obtained full permission from the parents to do whatever was thought proper, I proceeded as follows:— Having ascertained the situation of the joint between the astragalus and os naviculare, by feeling the projection of the latter bone, and that between the os calcis and cuboides by observing the middle distance between the line of the fibula and head of the metatarsal bone of the little toe, I made a semilunar cut from the one to the other, and then, instead of dividing the articulations, which I think renders the subsequent formation of a good flap very difficult, transfixed the sole of the foot from one extremity of the cross cut to the other, and then carried the knife close along the metatarsal bones, so as to detach an ample but well-formed covering for the face of the stump. The disarticulation was next effected with the utmost ease, so as to finish the operation in a very short time, and the plantar arteries being secured, the flap was retained in its proper place by five or six sutures.

The wound healed by the first intention, and the patient was able to put her foot to the ground in less than a fortnight. It was then observed, too, that she had regained the power of counteracting the extensors of the ankle, owing to the flexors having obtained new attachments. This is an interesting fact, as many people have objected to the operation, on the ground of its leaving no antagonizing power to the gastrocnemius and other extending muscles of the joint, whence the heel would be drawn up so as to point the cicatrix to the ground. Being in Göttingen some years ago, and seeing a patient on whom Langenbeck had recently performed the operation, I particularly inquired if, in his former cases, of which he had had two or three, any inconvenience on this account had been experienced, and was assured that there had not. The fact just mentioned will help to explain this. About six weeks after the operation, Ann Stewart came to the hospital and walked into the presence of myself and pupils, when we were examining the out-patients, so that I really could not from her gait fix upon the defective foot.

Amputation of Fingers and Toes.

It was necessary to remove several fingers and toes, on account of the destructive effects of paronychia and caries of the articulations. The amputations were all performed at the metacarpal and metatarsal joints by two lateral flaps, which were not made, however,

quite according to the plan of Lisfranc, who forms one while cutting into the joint, and the other when cutting out from it. This method answers very well where the parts concerned are in their natural state as to softness and laxity, but can hardly be accomplished without injury to one or other of the flaps where they are thickened and indurated, in consequence of the preceding inflammation. In such cases I think it is much better to form the two flaps previous to opening the joint, and even make a little dissection, if it is required, to separate their preternaturally firm connexion to the subjacent parts.

Though the bad consequences of leaving an articular surface in amputation are certainly by no means so great as they were formerly supposed to be, it cannot be denied that the wound, after apparently being nearly or entirely healed, is subject to repeated attacks of pain and redness, with more or less discharge of thin serous matter. This disturbance, which is doubtless to be ascribed to irritation attending the removal of the cartilage by absorption, occurs more frequently and to greater extent when the disease requiring amputation is acute, than when it is chronic, of which there was a good illustration when the cases in question were contrasted with that of amputation through the tarsus, since in three of the former there was considerable trouble from the source referred to, while in the latter the much more extensive articular surface offered no obstacle to the cure.

It would, I am convinced, be a prudent precaution in removing fingers, where the integuments concerned in the operation are altered by the disease, to take away the articulating extremity of the remaining bone. This can be readily done with cutting pliers, and will prevent any risk of the bad consequences above-mentioned. Thus, in operating on Robert Loughhead, a stout overfed porter, whose great toe was carious, in consequence of a bruise received some weeks previous to admission, by the fall of a heavy box, and where the integuments were much thickened, &c. I cut off the round articular head of the metatarsal bone.

Exfoliation of the whole Upper Jaw.

The extraordinary case of an out-patient may here be mentioned. Mrs. C——, about nine years ago, when 20 years of age, became afflicted with a sore on the nose, for which, by the advice of a surgeon in town, she took very large quantities of mercury. The sore extended, the bones became affected, and a rapid exfoliation commenced, which soon deprived her of all the face, except the lower jaw and part of the osseous malarum. I first saw this wretched woman about four years ago, when she presented an appearance inconceivably shocking. The eyes were divested of their coverings, the pharynx was completely exposed to view,

and the tongue lay exposed from root to apex, surrounded by the foul and vacillating teeth of the lower jaw, while the whole surface exhibited a most unhealthy description of ulceration. I saw her about six weeks ago, having not done so for a long time previous, and was surprised at the change which had taken place. A cure, so far as a cure was possible, had been completed; the whole ulcerated surface was healed, and the eyes were covered with a firm skin. She was miserably weak, and for a long period had subsisted on little else than laudanum, of which she took daily at least half an ounce. She died soon after this time, when I fortunately obtained the whole head, and ascertained that the remaining bone was everywhere perfectly sound. I do not know how this cure can be explained, except on the principle of the *hunger cure*; and think it may, perhaps, lead to a trial of this severe but powerful remedy in other desperate cases.

Actual Caution.

For some time past I have made much use of another remedy very fashionable in Germany—I mean the actual cautery, as a counter irritant. In the *morbus coxarius*, and similar disease of the shoulder-joint, the *Omalgia* of Rust, I have derived the most striking benefit from its employment. The only case affording fair opportunity for its application was that of William Aitkinson, æt. 36, a plasterer, who was admitted on 9th June, laboring under extreme weakness and loss of command of the inferior extremities, with pain and weakness of the back, which was tender to pressure in the region of the loins. His complaints had existed for six months, and were increasing. I burned him very freely with the prismatic cautery of Rust on both sides of the spinous processes of the lumbar vertebrae, and had the satisfaction of seeing him improve daily, so soon as the slough separated. His improvement was regular and progressive, so that when dismissed, on the 22d July, he labored under awkwardness more than weakness of the limbs; he was able to walk quickly, and even to leap with both feet,—in short, had the prospect of a perfect recovery.

Hydrocele.

There were only two cases of hydrocele, but both rather interesting. The first was that of William Macintosh, æt. 28, a north country cattle-drover, who entered the hospital on the 17th May, laboring under the following complication of diseases:—Sores on the penis, bubo, ague caught on passing through some of the fenny districts in England, and a hydrocele of nine years standing. Having subdued his other disorders, I punctured the hydrocele, and evacuated a large quantity of chocolate-colored fluid, holding in suspension many of those small shining scales which my friend Dr. Christison has found to be Cholesterine. As

there was much enlargement of the testicle, and great thickening of the sac, we did not think it right to inject, and proposed to the patient to perform either the old operation of excising the sac, that is to say, a portion of it, or the more simple process of castration. He preferred the latter, but before submitting to it, found it necessary to return to the north to execute some business of importance. It is this sort of hydrocele which has been named *hæmatocele*, and probably with some reason. In the case just related it was observed, that when the dark brown fluid was allowed to stand quietly in the glass, a quantity of pure blood collected in the bottom; and in another case formerly under my care, the hæmorrhagic nature of the disease was still more manifest. I punctured a large hydrocele, and drew off a quantity of the same sort of fluid as above described; but finding that by far the greater part of the swelling still remained, and that the patient, who for several years has been frequently prevented by fits of pain from following his avocation for weeks together, was now suffering more than ever, I proposed removal of the testicle, and performed the operation with perfect success. On examining the tumor, I was not a little surprised to find the testicle quite sound, and that what had led me to think it enlarged was a great mass of dense fibrinous matter, which adhered no less firmly to the tunica vaginalis than the coagulum of an old aneurism does to its inner surface.

(Edin. Med. and Surg. Journal.)

To the Editor of the London Medical Gazette.

Bolt Court, Fleet-Street,
Dec. 30, 1829.

SIR,

I beg leave to state that your conjecture in the last number of the Medical Gazette, that the printer of the Lancet was the bearer of Mr. M'Christie's message to Dr Macleod, is incorrect.

I am, Sir,

Your obedient servant,

SAM. MILLS, Jun.

BOOKS RECEIVED FOR REVIEW.

Researches principally relative to the Morbid and Curative Effects of Loss of Blood. By Marshall Hall, M.D.

Auli Cornelii Celsi de Re Medica, libri octo. Ex recensione Leonardi Targii, interpolationibus tantummodo emendatis. cur. G. F. Collier, M.D. (Vol I.) together with an entirely new Translation of the same Author.

The Muscles of the Human Body, describing their Origin and Use. Arranged in Four Tables: for the use of Students.

Outlines of Mental Diseases. By Alex. Morrison, M.D.

Manual of Therapeutics. By L. Martinet, D.M.P. Translated, with Alterations and Additions, by Robert Norton, M.D.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, JANUARY 9, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XV.

Ulcers—their Divisions and Treatment.

WE observe, Gentlemen, numerous and important modifications in the character and progress of ulcers, and these require a corresponding difference in treatment. Ulcers may be divided in the first place into *common* and *specific*. The latter, such as those of the carcinomatous, syphilitic, and scrofulous kinds, will be considered in other parts of the course. But even *common* ulcers, that is, those which arise from ordinary causes in constitutions otherwise healthy, are by no means uniform in their appearance or progress.

The character of an ulcer, and its progress towards healing, will be modified by its position in the body. Ulcers that are seated on the trunk—that is, near the centre of circulation, heal more quickly than those on the extremities; and those on the upper limbs more quickly than those on the legs, the dependent position of the lower extremities being unfavorable to the return of the venous blood. The general health of the individual exercises a considerable influence over the progress of ulcers. Thus the appearance of a sore is a tolerably good criterion of the state of the individual in whom it occurs. If a patient having an ulcer is seized with fever, you will quickly find an important change in the aspect of the sore. A healthy ulcer is one in which the restorative processes are going on favorably, as we see in individuals of sound constitution. The newly deposited substance in such an ulcer is of a firm consistence; the granulations are small and pointed, and do not rise above the level

of the surrounding skin; the color of the granulations is florid, as if the capillaries contained arterial blood. But even in an ulcer of this description the color will depend a good deal on the attitude of the limb. For instance, though the color of the granulations is florid when the limb is in an horizontal position, yet if it be allowed to hang long down it will swell and become livid, and some of the tender veins will give way, and blood will escape even in a healthy sore. The pus secreted by such a sore is thick, whitish, and moderate in quantity.

The treatment of a sore that is proceeding in this way you will immediately perceive must be very simple. You have only to cover it externally with a soft poultice, or simple dressing and bandage, and allow nature to go through the process she is performing so well. It may happen that the granulations rise a little above the level of the surrounding skin; and this daily happens in the process of cicatrization, which consists essentially in an extension of new skin from the margin of the old, and hence when the granulations rise above the surrounding level, you apply corrosives, such as sulphate of copper, or nitrate of silver.

Indolent ulcers are seen on the lower extremities of old and unfavorable subjects, especially after a long application of poultices, or similar remedies. The granulations are large, pale, flabby, or spongy, and there is a copious discharge of thin pus. The limb generally is swelled and oedematous; the appearances, in fact, in the sore and in the limb generally, are those that mark a want of vigor in the parts. I have already adverted to the effect which position has on the return of venous blood, and thus in influencing the appearance of the ulcer. Of course the horizontal posture, both of the limb and of the body, is more favorable to the return of venous blood from the extremities than the perpendicular position. Hence you might suppose that in the case of a sore with the characters that I have just described, it would be best for the individual to be kept constantly in an hori-

zontal posture—to lie in bed. No doubt the blood returns more easily, and the posture is more advantageous to the natural process of restoration. But to confine a person to bed simply because he has a sore on the leg is, in many respects, objectionable; and a mere confinement to the horizontal posture is not sufficient to answer all the purposes necessary. In such a case we find that pressure has a great effect in promoting the return of venous blood; and thus it has a most beneficial influence where the veins are generally distended, and where tumefaction exists in the limb throughout. A person who has the leg swelled and painful, so that he cannot put it to the ground, or walk upon it, if he have the limb regularly bandaged from the toes upwards, will find immediately that he is able to hang the leg down, and walk upon it without difficulty. The main point, then, in the treatment of indolent ulcers, is the application of external pressure, which may be made either to the limb generally or to the part of the limb in which the ulcer is seated, but the most advantageous mode of applying it is to the entire limb.

Pressure may be made in this way by means of a bandage of calico or flannel, applied regularly and uniformly, and as firmly as the patient can bear it, from the toes to the knee. The application of such a bandage, if it be judiciously practised (and it should be a simple application to the part), will often do all that is necessary towards healing sores of this kind. However, of late years we have been in the habit of employing, not only this *general* pressure to the limb in such circumstances, but also a more *particular* pressure to the part of the limb in which the sore is seated, by means of strips of adhesive plaster. This is the mode of treating indolent and old ulcers of the leg proposed by the late Mr. Baynton, an eminent surgeon in Bristol. You spread a little diachylon, or adhesive plaster, which is the same preparation rendered more adhesive by the addition of resin, or you take, what is a common application in many cases of this kind, the same plaster, rendered sufficiently adhesive by mixing a little tar with it, (you find a drachm of tar, mixed with three or four ounces of diachylon, will give it the adhesive quality, and it will irritate the skin less than the ordinary adhesive plasters); the linen, thus spread, is cut into slips, about two inches in width, long enough to encircle the limb, and to have about three inches over. These strips are applied to the part of the limb which contains the sore, two or three inches above and two or three inches below it. You make the application by putting the middle of the strip over the sound part of the limb, and passing the end of it over the sore, giving it such tightness as the patient can bear, but not endeavouring to apply it as tightly as possible. Then each successive

strip covers about one-third of the upper edge of that already applied. Thus you put them on one after another till you have inclosed a sufficient part of the limb. You then apply a roller, from the toes upwards, in the way that I have mentioned; and this is the mode of treating ulcers of the leg which was found so beneficial by Mr. Baynton, and which, in consequence of his introduction of it into practice, is generally adopted. He mentions that the application of the plaisters sometimes produces a slight degree of pain and heat in the limb; and under such circumstances, he recommends that the parts should be put up for a little time, and that a wetted rag should be put over it, so as to moisten the bandage.

In conjunction with this proceeding, you may adopt other local means to the sore. There are certain applications in the form of ointment and other things which are capable of exerting a beneficial effect on indolent ulcers of this kind. I believe, in general, that you will find the simple application of pressure will nearly do all that is wanting; but you may apply, in conjunction, the red precipitate ointment, or the citrine ointment. Heretofore surgeons made great use of *digestive ointments*, which produced a healthy secretion of pus, such as yellow basilicon. The nitrate of silver, or the sulphate of copper, may be applied in substance if necessary, or they may be applied as a lotion; and the same applies to the sulphate of zinc and oxymuriate of mercury. It is not necessary to keep the patient to his bed when an old ulcer is treated in this way; indeed it is of great advantage to him to use the limb, and, consequently, to follow his ordinary avocations. It is usual to dress the sores in this manner once in two or three days. Commonly, these indolent sores, when left to themselves, secrete abundantly a thin and unhealthy kind of matter. When treated in the way I have mentioned, however, the quantity of discharge is diminished, and it becomes more consistent, so that there is no necessity for a frequent renewal of the dressings. I believe these indolent ulcers are what some writers have called *fungous ulcers*, the granulations being apt to rise up in considerable masses.

You will sometimes read of *callous ulcers*; and you see an ulcer in which the margin of the sore is elevated and indurated, and in which the highest part of the elevated margin becomes covered with a thick cuticle, which is rendered white and sodden by the application of moisture. The surface of the sore presents an excavation, which, instead of presenting a raised surface like the indolent sore, has a smooth cavity, as if there were no granulation, and in which there is a little discharge of a kind of pus, but in which there is no evidence of a disposition to the restorative process. Local stimuli and

pressure are the means to be employed under such circumstances.

A varicose state of the veins of the lower extremities often leads to chronic inflammation of some portion of the skin, particularly of the leg; and the skin when thus inflamed easily passes into a state of ulceration. Thus you have a sore formed which depends on the varicose condition of the veins of the limb, and which has hence been called *varicose ulcer*; not that the ulcer is varicose in itself, but it is an ulceration of the skin, arising from chronic inflammation, which depends on the morbid state of the veins of the limb. In the first place it is expedient to put a stop to the inflammation of the integuments in this instance; and for this purpose you may apply leeches freely to the part, and afterwards a bread-and-water poultice. When you propose the application of leeches to such inflamed surface of the skin, the patients are often alarmed, and say, "will not the leeches bring the skin to a sore?" They are afraid that the application of leeches will produce fresh ulceration. This is a groundless apprehension. The abstraction of blood locally has a powerful influence in removing the inflammation in the skin; and if you do that, you do a great part of what is necessary towards removing the ulcer. You find it then assume a healthy aspect, and that it will heal up under simple dressing and pressure.

An important class of sores is what we call *inflamed ulcers*. Inflammation is the source or cause of ulcerative absorption generally, as I have already explained; and the continuance of inflammation shews that ulceration is extending; nay, the super-vention of inflammation in an unhealthy ulcer puts a stop to the healing process, and occasions the ulcer again to extend. Inflammation may exist in various degrees in ulcers, producing different kinds of unhealthy appearances in them, which are denoted by various terms. We hear people speak of *painful sores*, of *irritable sores*—and these, in fact, are only other words for sores that are inflamed. *Ill-conditioned sores* imply chiefly those in which there is a discharge of an unhealthy kind, arising from a state of inflammation in the sore. *Inflamed sores*, *sloughing sores*—these are only varieties in the degrees of that state which generally may be called *inflammation in the ulcer*.

When a high degree of inflammation exists in a sore, the margin of the ulcer is red, and very painful—frequently it is of a fiery red. The limb is generally swollen and hot. I speak of a case in which there is a considerable sore—seriously inflamed. The granulations visibly disappear, they are absorbed, and instead of a healthy surface you have an irregular excavation, of a foul, tawny yellow, livid, and sometimes bloody appearance. There is an unhealthy matter produced in the part, and

streaks of blood appear in different situations on the sore. You will not expect sores of this kind to secrete good pus—in fact, nothing like pus appears in the discharge from them; but instead of pus, there is formed, in considerable quantity, a thin foetid, nearly watery fluid; or a kind of thin matter, colored red by the admixture of blood; or sometimes a thick viscid glutinous substance, of various colors. There are different kinds of unhealthy discharge from inflamed ulcers, which have been technically called *ichor*, *sanies*, and *sordes*;—*ichor* being a thin discharge like serum; *sordes*, a thin matter tinged with blood; *sanies*, a thick bloody discharge. Under these circumstances, it will frequently happen that a part of the surface will slough, and if the sloughing process continue, of course the sore extends with great rapidity in depth as well as in circumference. It may happen that some vessels of considerable size are laid open by the sloughing; and that bleeding will take place from the surface of the sore; which, in fact, is not unfavorable under such circumstances, for the loss of blood from the part empties the distended vessels, and affords a natural relief to the inflammation. Sometimes, instead of the process that I have mentioned, it appears as if the granulations were converted into a kind of greenish substance, from which a thin and very offensive discharge issues in considerable quantity; and the surface of the wound being inflamed, very great pain is experienced in the part. When this discharge is going on, it affects the system generally to a greater or less extent. If the causes of this state of the sore are neglected, or if there be no proper attention paid to it, such ulcers lead to a considerable destruction of the part in which the sore is situated, particularly in the lower extremities. To the causes which we have mentioned by which the inflammation is maintained, we must add the further aggravation of intemperate indulgence in the use of fermented liquors.

The first object under such circumstances must of necessity be to put a stop to the inflammation. This respects the general employment of the means that have been mentioned under the term of antiphlogistic treatment—the general or local loss of blood, purgation, reduced diet, rest of every part. Of course local applications to such a sore must be of a soothing character—such as fomentations and warm poultices. I should mention, that when the pain is very considerable, and when the depletion which may be necessary has not removed it, it is often expedient to give a pretty good dose of opium after the loss of blood. By the continuance and repetition of these means, you remove the inflammation, and then the case is to be treated according to the principles already mentioned.

It frequently happens that inflammation retards the healing of a sore. Although it is not attended with the obvious and striking changes that I have now depicted—although the inflammation does not go so far as to produce these serious effects, a slighter degree of inflammation frequently keeps up the ulceration, and prevents the progress of the restorative process, more especially in young persons, in those of plethoric habit, and in free livers. Again—where extensive ulceration has existed in the lower extremities, and where it is going on favorably towards a cure, the healing process will frequently be arrested, and the sore again spread, if we do not pay particular attention to regulate the diet of the patient—if we allow him a full quantity of animal food and the use of fermented liquors—or if we neglect the state of the stomach and bowels. We shall find, under such circumstances, that the patient will complain of feeling uncomfortable—of headache. On superficially looking at the sore, we do not see a change; but by examining it, we find the granulations are giving way—at a few points they are beginning to look foul and yellow. If you examine the limb still more attentively, you will probably find an unnatural degree of heat existing in it generally. Under the circumstances that I have now mentioned, you find it advantageous to take blood from the arm, to give the patient an active purgative, and to reduce his diet. You may generally, in cases of considerable ulcers, such as involve important parts, order the patient to be confined to his apartment, if not to his bed. It will be necessary that he should be quite on sick diet; it is totally unfit to allow such a person meat and fermented liquors, for if you do so, you will frustrate the attempts that are made locally for the cure of the ulcer. A strange notion often exists in the minds of medical men, when they see a large sore—that it is necessary to give the patient generous diet, and to allow meat and wine, that the system may support the discharge that takes place; while that very discharge probably arises from the state of inflammation in the limb. This is really only adding fuel to the flame, and is a most injudicious mode of procedure. Instead of doing this, you often find it necessary, where the patient is on moderate diet, to take blood, to institute active purgation, and to reduce the diet still farther in the progress of cases of this kind.

When large ulcers are healing very rapidly, it is necessary for you to pay great attention to some points, in order to prevent the occurrence of other serious mischief. For instance, when an active disease of this kind is put a stop to, unless great attention is paid to the circumstances that I have mentioned there is much reason to apprehend that some other part of the frame will be-

come affected. I have in many instances seen in such circumstances, where persons have been allowed full diet, that the healing of the leg has been followed by apoplexy or palsy, or in some a serious disease in the chest or abdomen.

In the highest degree of inflammatory disturbance in an ulcerated part, I have mentioned that some portion of the surface will occasionally slough; and then you will have what is called a *sloughing ulcer*. If antiphlogistic treatment does not put a stop to the process of sloughing, and if the part does not separate, you often find some advantage in the employment of local stimuli, such as the balsam of Peru, or dilute nitric acid lotion. These applications are of great service in those cases in which there is a combination of ulceration and mortification, and where the pain is considerable, opium must also be employed.

That condition of ulceration which we call *phagedænic*, is most commonly seen in syphilis; but it is by no means confined to syphilitic disease. Phagedænic ulceration may occur under other circumstances. We see it frequently as the result of a considerable inflammation which occurs in the generative organs, particularly those of the male, where clap or sores may have existed. Where the complaint has been much neglected, a serious disease is brought on, which terminates in mortification. The prepuce mortifies, separates, and exhibits that particular character which we call phagedænic ulceration. Now the word *phagedæna*, which is derived from the Greek, means *eating into the flesh*,—in fact the sore which we call phagedænic, exhibits that kind of surface to which the name corresponds—it is eating away and destroying by ulceration and absorption the parts which it attacks. The sore exhibits nothing like granulations: there is an irregular surface, generally yellow or whitish, with a little matter here and there, something like streaks of blood upon it; the margin of the ulcer and the skin are red and painful, and the process of destruction in phagedænic ulcers is attended generally with considerable pain in the part. It is of course the first object in these cases to put a stop to the state of inflammation in the surrounding parts. Although you adopt means to do this, you often find that this ulcerative destruction continues. The parts are destroyed very rapidly, but the same pain continues; and, in fact, you find it necessary to resort to other measures besides those of simply removing the inflammation. After you have adopted these preliminary measures, and carried them as far as you think it possible, the most effective mode of treatment then consists in the local and general employment of *opium*, and that in a free manner. The severe pain that accompanies the process may originally have indicated

the use of opium in these cases. The internal application puts a stop to the general *symptoms*; and the local application has a beneficial effect on the *phagedæna*. You give as a dose five grains of Pil. Sapon. cum Opio every six hours, so as to keep the patient under the remedy. You may also employ such local means as are necessary to prevent irritation. If the opium does not accomplish the purpose, you may foment the part with the liquor opii sedativus, made by Battley, —you may apply this, using one half of water, or simply cover the part with lint soaked in it; and in this way you find the most speedy removal of pain is accomplished in this description of phagedænic ulcers.

I have lately had a case of this kind under my care in the hospital, in which this mode of treatment has been successfully adopted. A young man came in who had had the prepuce and glans swelled from inflammation, and mortification had taken place of about two-thirds of the glans. When he came to the hospital some of the slough had been detached, and the part from which this had been removed was of a phagedænic character. There was a high state of inflammation of the prepuce, and the sore had the character I have just mentioned. The treatment to which I have referred was adopted in this case; and in about three days the surface, both of the prepuce and glans, had as completely healthy a character as I ever saw in a case of ulceration. The case proceeded favorably throughout, and the patient recovered, except as regards the loss of those parts I have mentioned; and as they mortified before he came to the hospital, we could not help that.

Another patient came to the hospital at the same time with severe inflammation of the prepuce. In consequence of matter having formed, it was necessary to lay the parts open. Here the balsam of Peru first, and subsequently mercurial embrocations, were tried. But these stimulating means, I think, added to the mischief—at least they did not check it; and the soothing narcotic treatment was adopted instead; under which the ulceration stopped, and was soon healed. It may sometimes happen, when all inflammation is removed, when there is no local pain, and yet the healing process does not commence, that you may find it necessary to have recourse to some local stimulant. Under such circumstances I believe applications of a mercurial kind are the best. The black wash is one of a mild kind; and the cinna-bar fumigation is another of a more active character.

What is called a sloughing phagedæna seems to be the unhealthy state of a sore, which I have now described, carried to the greatest extent—phagedæna gangrenosa, a mixture of gangrene, with a destruction of the sore by ulceration. The instances that

we see of it in this hospital are chiefly in young females who devote themselves to prostitution. We are not in the habit of seeing it in male subjects; in fact, men are not exposed to the particular combination of causes which produce sloughing phagedæna. It is chiefly seen in those younger members of the sisterhood who frequent some of the lowest haunts, where they lead lives of the most irregular description; where they are exposed to cold, insufficiency of clothing, and all the causes which are likely to depress the system or the powers generally, while they attempt to stimulate themselves by the use of spirituous liquors. It is in females of this kind, especially the younger ones, that this destructive form of ulceration, called sloughing phagedæna, shews itself.

They have gonorrhœa, or perhaps sores, attended with discharge. Now it so happens, from the configuration of the female organs, that discharge is not always evacuated, and the matter is apt to gather about the parts. The parts become irritated, excoriated, and inflamed, in consequence of these circumstances, and then they fall into the state that I am about to describe. The surface of the sore exhibits a reddish or brownish, and sometimes a yellow appearance, as if there were an intermixture of matter, of a yellow color; and we find, upon examining it, that there is a kind of pulpy case covering the sloughing parts; so that what you see is not, strictly speaking, the proper surface of the ulcer, but is a kind of unnatural decomposed state of the textures, produced by the action of the sloughing phagedæna. Besides the covering that closely adheres to these textures, there is a yellow appearance, as if from matter formed on parts of this surface, and you conceive that you could wipe off the matter with a probe and lint, but when you attempt to do so you find that it adheres closely. You find that the external surface of the sore is covered by a substance which is brownish, reddish, and sometimes actually black, being portions of slough. From these sores there exudes a large quantity of thin, sanious, peculiarly fetid fluid, which will indicate the nature of the affection. Without looking at a sore in an individual in this state, a person who has seen one or two cases will be at no loss in knowing what is the nature of the disease. The margin of the sore is red, and very painful; and it extends with great rapidity, both in circumference and depth, and destroys the parts so rapidly that we can hardly say how it is effected; they seem, as it were, to make up this pulpy substance that covers the surface of the ulcer.

Now it appears to be essentially a local effect, or peculiar state of the sore, arising from local causes, for frequently the constitution is hardly affected. Even when a very extensive affection of this

kind exists, you have the pulse perhaps a little excited by the want of rest; but you have the tongue clean, the appetite is good, the bowels are not materially affected, and there is no headache.

The first object in affections of this kind is to destroy the morbid surface which covers the sore, and this can only be accomplished by the very active application of escharotics. What we invariably use here for that purpose is the pure nitric acid. You dry the surrounding parts, so that the acid does not extend beyond the surface of the sore. You also dry the surface of the sore as well as you can with lint;—and then with lint wrapped round the probe, and dipped into nitric acid, you saturate the sore till you have acted on it by the acid so as to destroy it effectually, and it is reduced to a brown eschar. It is a great object, in conducting a case of this kind to a favorable termination, to prevent the recurrence of the cause that produced the affection originally, and you must also take care not to allow any matter to rest on the surface of the surrounding skin. You will not want any other application after the nitric acid but dry lint, which you must apply frequently to the sore, to prevent it inflaming or excoriating the skin. You find the slough made by the nitric acid when it separates will lead to a clean sore, and that under the application of dry lint it will heal up, and you want nothing else in such a case except the application of nitric acid in the way I have now stated. I have seen many cases of sloughing phagedæna in females, producing sores nearly as large as the palm of my hand, cured by a single application of this kind. The application of acid is sometimes painful, and you will find it necessary to give twenty drops of tinct. opii; and when you have put a stop to pain in the part, the patient may be said to be well; in fact no constitutional disturbance exists, so that the patient recovers very speedily.

I have mentioned that these occurrences generally take place in women of the town, under the particular circumstances that I have now stated; but it is by no means exclusively confined to cases in which the origin might be supposed to be venereal. I remember a very bad instance in this hospital, in a case that was under the care of Dr. Latham, by whom I was requested to see it, on account of the sloughing phagedæna. It was a young woman who had had the small-pox very badly. The disease had rendered her very weak, and diarrhoea came on. There was a considerable discharge from the vagina, and a constant moisture of the parts by a discharge from the rectum. Thus the skin of the nates became highly inflamed, and, in fact, a large excavation of sloughing phagedæna formed on each buttock, and she was reduced to a very low state by the disease. Dr. Latham asked me what

I thought could be done; and having examined her, I thought badly of the case, but that we might destroy the excavation in her buttocks, which were each nearly as large as a good-sized tea-cup, and possessing all the characters that I have mentioned. They were treated by nitric acid, in the way I have described; she had port-wine liberally allowed her, and, in fact, she got perfectly well. This was a case of a common kind, in which you could not ascribe the effect to syphilitic disease.

Now, as far as I can understand the affection called *hospital gangrene*, it is the same as the sloughing phagedæna that I have now described. This is, by the French, called *pourriture des hopitaur*; and our term, *hospital gangrene*, is nearly a translation of it. *Hospital sore*, *putrid malignant ulcer*—these are terms under which it is described by those who have observed it in the naval or military service. It is an unhealthy state of ulcers, whether consequent on wounds or operations, or an ulcerative absorption occurring in certain situations, such as hospitals, prison ships, or other situations where individuals are crowded together in great numbers, and where the apartment cannot be well ventilated. It appears to be an unhealthy state of the ulcer, brought on by the local influence of foul atmosphere upon the sore. We find, under various circumstances, that the crowding together of human beings in a small space has a pernicious effect on all, without being able to point out how the occurrence is brought about. Now, in an hospital in this town, where the wards are capable of containing twenty patients, it would sometimes happen, from the crowded state of the hospital, that a few more patients were placed in the ward. This was done repeatedly; and at last it was found out, that, if ever the twenty was increased to twenty-four, or twenty-five, typhus fever would break out in the ward. The extreme crowding in the ward produced the obnoxious effect that I have mentioned. It happened to me to have a young woman under my care in this hospital, who had a sloughing phagedæna: it was a bad case. The application of nitric acid had the usual beneficial effect, and the case was going on very favorably. She was in one of the public wards. It was necessary that one of the wards should be white-washed and cleansed; and consequently, although the patients were pretty numerous in the ward in which she was; a certain additional number was put into it; so that, in the ward which should have contained only fourteen, there were perhaps eighteen or nineteen. In two or three days this young woman, who was going on well, experienced a relapse; the state of sloughing again occurred, so that it was necessary to remove her from that situation.

This condition, then, of sore, which is

called hospital gangrene, is to be regarded merely as a local effect, produced by this particular cause, or as a local unhealthy state of the sore—that is, it cannot be explained by any condition of any organ, or sets of organs, in the system. The sore in which this particular change takes place becomes painful, the margin becomes inflamed, and then the sore passes into the state that I have described. The granulations are absorbed; the secretion of pus ceases; a whitish substance forms in the sore, which becomes thicker; a yellow foetid matter mingles itself with this substance; it rises above the level of the surrounding parts, and under this external covering the ulcerative process extends very rapidly, and destroys the part with great rapidity. Although the patient's health had not been previously disturbed, of course the occurrence of such serious local mischief does affect the general system. The digestive organs suffer sympathetically. The patient, in the first place, has those organs disturbed, and in the progress of the affection the system generally, suffers.

If there is any thing of a contagious property in this affection, it is of course very important, in treating it, that those who are infected should be separated from others, both for their own sake, that they may be taken out of the influence that produces it, and also to prevent the propagation to others. It is a point not clearly made out, whether phagedæna, and sloughing phagedænic forms of ulcer, are capable of influencing others, by their contagious property, or whether the circumstance of their appearing in a considerable number of individuals at the same time arises from these individuals being exposed to a common cause. We have not much opportunity of observing any thing of this kind in such an hospital as this: from the wards being large and airy, and not crowded, no circumstances capable of producing hospital gangrene exist here. But in some institutions, where there have been cases of bad phagedænic disease, the patients that have had common ulcers and have lain near them, have had their sores go into the same unhealthy state. This has happened in so many instances in my wards, that I cannot help believing there is some contagious influence observed—that there is some contagious property in this sloughing phagedæna, which is capable of affecting the ulcers of other individuals;—at all events, it is expedient, when any thing of this kind appears, to separate those patients that are affected from those that are not.

The treatment, in other respects, is the same as I have mentioned for sloughing phagedæna. You have to destroy this morbid surface by some adequately powerful escharotic—the nitric acid, or caustic pot-

ash. The lunar caustic is not powerful enough. Aromatic vinegar has been recommended, but that is not powerful enough, for even caustic potash will hardly act sufficiently through this peculiar viscid mass of substance that covers the ulcer. The nitric or the muriatic acids, are the substances with which you can most effectually treat the case. Professor Delpech, who had great opportunities of seeing such cases in the last war, mentions that he had received into the hospital 150 soldiers who had been wounded or operated upon at the siege of Pampluna, and that he treated them all successfully by actual cautery. No doubt actual cautery would be a sufficiently powerful means for destroying the surface in these cases, but perhaps it does not matter exactly what is the precise mode of accomplishing the purpose; the object, is to adopt means sufficiently powerful to destroy the morbid surface, and thus to allow of the formation of a healthy granulating sore; and those combined means which are capable of removing the external surface, and which seem to have a powerful influence in reducing the constitutional affection, may be confidently relied on as sufficiently effectual in the treatment of the case.

ON THE

NERVES OF THE FACE;

Being a second paper on that subject.

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AFTER the announcement of the facts in my first paper, the inquiry became interesting from its application to medical practice. I must take another opportunity of thanking those gentlemen who have so liberally afforded additional proofs of the truth of my principles.

The system of Willis, of which we have an elegant account in the posthumous works of Dr. Baillie, prevailed universally in the schools when I entered on these inquiries. In opposition to that system, I demonstrated that the nerves hitherto supposed to possess the same powers, consisted of filaments having different roots, and performing different functions. I found myself embarked in this investigation, from observing the course which the nerves

took in their distribution through the body. Conceiving that the devious course and reunion of the nerves were for a purpose, I sought in their origins for the cause of their seeming irregularity. It was discovered that the roots of the nerves arose from distinct columns of nervous matter, and that on these columns depended their different properties. Those which were called the common nerves, that is, the nerves which arise from the spinal marrow, thirty in number, were found to consist each of two nerves derived from distinct columns, one for sensation and one for motion. In the further pursuit of this subject, there was reason to conclude that the spinal marrow contained not only the columns for bestowing sensation and motion, but also another column, the office of which was to combine the actions of respiration. I then drew the attention of the Society to the course of the fifth nerve of the brain according to Willis. I shewed that it had the same double root as the spinal nerves, that it had a ganglion, and that part of the nerve passed free of the ganglion; and that from all these points of resemblance, it was to be considered as the anterior or superior of the spinal nerves, of that system which is called symmetrical, and which ministers to the same functions in all classes of animals, bestowing sensibility and the locomotive powers, but deficient in those filaments which command the respiratory motions. I am particular in restating this, because from time to time it has been reported that I had abandoned my original opinions; whereas every thing has tended to confirm them.

From the general view of the nervous system, I drew attention to the super-added or irregular nerves. Having shewn that the original or symmetrical system of nerves, of which the fifth was one, had no power over the motions of respiration, and that the human countenance in all its motions, with the exception of mastication, bore relation to the actions of respiration, it was therefore required that another nerve, besides the fifth, should be sent to the face. Having shewn also that the roots of the fifth nerve were distant from that column of nervous matter which gives origin to the nerves of the respiratory system, and that it could not therefore minister to the motions of the face

which are connected with respiration; and that another nerve, the portio dura, having its root in common with the nerves of respiration, took its course to the face,—the subject was prepared for experiment.

By experiments on the nerves of the face these three things were proved: First, that the sensibility of the head and face depended on the fifth pair of nerves. Secondly, that the muscular branches of the fifth were for mastication; and in the third place, it was proved that the portio dura of the seventh, or respiratory nerve of the face, controlled the motions of the features, performing all those motions, voluntary or involuntary, which are necessarily connected with respiration;—such as breathing, sucking, swallowing, and speaking, with all the varieties of expression.

Reserving the details, I shall now state shortly the occurrences which I have witnessed since the publication of that paper; as they afford convincing proofs of the correctness of these opinions.

The first instance was in a man shot with a pistol ball, which entered the ear and tore across the portio dura at its root. All motion on the same side of the face from that time ceased; but he continued in possession of the sensibility of the integuments of that side of the face.

The next instance was in a man wounded by the horn of an ox. The point of the horn entered under the angle of the jaw and came out before the ear, tearing across the portio dura. He remains now a singular proof of the effects of the loss of function in the muscles of the face by this nerve being divided. The forehead of the corresponding side is without motion, the eyelids remain open, the nostril has no motion in breathing, and the mouth is drawn to the opposite side. The muscles of the face, by long disuse, are degenerated, and the integuments of the wounded side of the face are become like a membrane stretched over the skull. They have lost their firmness, and the flesh under them is wasted, with the exception of certain muscles, the reason of which will be understood on perusing the anatomical description in the present paper. In this man the sensibility of the face is perfect. The same nerve (portio dura)

has been divided in the extirpation of a tumor from before the ear, and the immediate effect has been horrible distortion of the face by the prevalence of the muscles of the opposite side, but without the loss of sensibility; and that distortion is unhappily increased when a pleasurable emotion should be reflected in the countenance.

These facts are so distinct, that I cannot presume to detain the Society with the instances of the lesser defects which I have witnessed from the more partial injuries or temporary diseases of the nerve;—such as distortion of the features produced by glands pressing on this nerve, paralysis from suppurations in the ear affecting the nerve in its passage, or temporary derangement disturbing one or more of its functions.

As to the fifth nerve, the facts are equally impressive, and correspond with our former experiments and opinions. By a small sacculated tumor affecting the roots of this nerve, the sensibility was destroyed in all the parts supplied by its widely extended branches; that is, in all the side of the head and face and the side of the tongue, whilst the motion of the face remained. Two circumstances affecting this nerve have occurred with most curious coincidence in the symptoms. By the drawing of a tooth from the lower jaw, the nerve which comes out upon the chin to supply one half of the lip was injured, and exactly this half of the lip was rendered insensible. When the patient put his mouth to a tumbler, he thought they had given him a broken glass! Precisely the same thing occurred from the division of that branch of the fifth nerve, which goes to one half of the upper lip. A gentleman falling, a sharp point entered his cheek and divided the infra orbital nerve: the effect was loss of sensation without loss of motion, in that half of the upper lip to which the nerve is distributed. The remarkable circumstance was, that this individual made the same remark when the cup was put to his lip:—that they had given him a broken one! The part of the cup which was placed in contact with the insensible portion of the lip appeared to him to be broken off.

I have had two or three instances before me of disease affecting the ophthalmic branch of the fifth nerve, and producing total insensibility of the eye and eyelids, without loss of vision; whilst

the eyelids continued to be closed and the eyebrow to be moved by the influence of the portio dura of the seventh nerve.

Such are a few of the facts which have been reaped from a patient reliance on the correctness of my first deductions, and I would now urge them in proof of the importance of reasoning upon the anatomy. All these nerves have been repeatedly divided, by almost every surgeon of eminence in the three kingdoms. Although some have performed the operation of dividing the nerves frequently, and one eminent gentleman had done it six times on the face of the same man, all these operations have been performed without giving rise to the suspicion that these nerves bestowed different properties. Even now, so slow is the progress of improvement, it is stated by a surgeon that he will not hesitate to cut the portio dura in the case of tic douloureux. My duty is performed when I give publicity to the facts which prove that horrible distortion of the whole countenance, the loss of distinct articulation, the loss of expression, the loss of motion of the eyelids, and consequent inflammation of the eye, must follow such an operation.

Much has been said in favor of experiments when made by men who are positively without any expectation of the result, or, as they affirm, are unbiassed. The only instances of this that I can allow, are when the surgeon cuts the nerves of the face in a surgical operation. In such operations as these for tic douloureux, he is indeed unbiassed; and we have seen the result, that after fifty years of such experience we remained quite ignorant of the distinctions in these nerves. But on the other hand, when attention is roused to inquiry by anatomy, facts are obtained of the utmost importance both to the knowledge of disease and to the safe practice of surgery.

Of the Motor or Manducatory Portion of the Fifth Nerve.—The fifth nerve is usually called trigeminus, from piercing the skull in three grand divisions. But when it has been shewn that it is composed of two distinct roots having different functions, the accidental circumstance of its divisions passing through the bones yields in importance to another inquiry,—How is the muscular portion of the nerve distributed?

Since the publication of my first paper this inquiry has assumed importance; although the principal facts of the anatomy were known to Wrisberg, Santorini, Paletta, Prochaska, and Sæmmering. But in no author is the anatomy of the motor portion of the nerve traced with sufficient minuteness, or regard to the distinct uses of the muscular and sensitive divisions.

The motor division of the fifth nerve passes under the Gasserian ganglion, and free of it. It is not seen when we look from above, as in the plates of Monro. When the nerve is turned up and dissected, this portion is seen to form about a fifth part of the whole nerve. It is tied to the larger portion before advancing to the ganglion, by filaments which have been sometimes taken for nerves.

Having passed the ganglion, it attaches itself slightly to the superior maxillary nerve, but this is apparently a membranous connexion only. The nerve itself joins the third grand division after passing the foramen ovale. At this point the muscular and sensitive portions of the nerves are matted together, and form a mass which between the fingers feels like a knot. There is, however, no red and fleshy-like matter interposed here, as in the Gasserian ganglion of the trunk of the nerve. But the filaments of both portions of the nerve are here so complexly and intimately combined, that all the branches which go off after this union are compound nerves, and have motor filaments in their composition.

It is, however, equally obvious that the gustatory division of the nerve which descends from this mass has not the muscular portion given to it in that abundance which those branches have which take their course to the muscles of the jaws. The mandibulo-labialis, which also descends from this plexus, lies nearer the motor portion, and has a more distinct addition given to it than the gustatory nerve.

This motor or muscular portion which we are tracing, sends off no branch either in its course under the great ganglion, or after passing it about half an inch. But when it has arrived at the point of union with the ganglionic portion, the filaments become interwoven; and from this place the nerves are compound, and go off diverging to their destinations. First, there are sent off

nerves to the temporal, masseter, and pterygoid muscles, also to the buccinator muscle. The temporal muscle receives a large and appropriate nerve. The nerve to the masseter passes between the coronoid and condyloid processes of the lower jawbone; but before going into the muscle it sends branches to the temporal muscle. The pterygoid muscles have each their appropriate nerves coming direct from this plexus.

Ramus Buccinalis Labialis.—This is a remarkable branch which arises from the same source, and goes to the cheek and lips. This nerve, where it lies on the external pterygoid muscle, sends one more branch to the temporal muscle; it then divides, one branch enters the buccinator muscle, and another is prolonged forwards. The division to the buccinator muscle is tortuous, which is no doubt a provision for its being undisturbed by the free motion of the cheek; its minute branches may be traced until lost among the muscular fibres, whilst others penetrate to the lining of the cheek. The prolonged branch is the labial division; it runs nearer the alveolar processes of the lower jaw, and becomes so superficial as to admit a union with the portio dura: from thence passing under the facial artery it may be traced into the triangularis, or depressor anguli oris, the levator labiorum communis, and the lateral portion of the orbicularis oris.

In the distribution of the buccinalis labialis to the muscles of the mouth, it is joined, as I have said, by branches of the portio dura; and nothing is more striking than the manner in which this latter nerve passes over the masseter, a muscle of the jaw, to be profusely given to the muscles of the lips.

There is one more branch important to the physiology of the fifth nerve. At the root of the mandibulo-labialis (where it is sent off from the junction of the muscular and ganglionic portions), a small nerve takes its origin. This branch runs parallel to the greater nerve, till it enters the foramen in the lower jaw; here it seems to enter, but does not; it takes a course on the inside of the jaw to arrive at its final destination, the mylo-hyoideus and the anterior belly of the digastricus, that is, to those muscles which open the mouth by drawing down the jaw.

We may for a moment interrupt our

particular inquiry, to notice that all muscular nerves, and consequently the muscular divisions of the fifth nerve, form a plexus. The plexus formed by the motor and ganglionic divisions of the fifth nerve, before they diverge to the muscles of the lower jaw, corresponds with the plexus formed on the nerves sent to other classes of muscles. Even that branch of the third division of the fifth nerve, which comes out before the ear, joins the portio dura in a plexus; and this is the reason of that sensibility evinced in the facial nerve in making experiments upon it.

The form of the fifth nerve, and its resemblance to the spinal nerves, had struck some of the best continental anatomists. But as they had made no distinctions in the functions of the roots of the spinal nerves, so neither did they imagine any difference in the roots of the fifth nerve, and therefore no consequence resulted from having observed this resemblance. This part of the anatomy, together with the whole minute relations of the nerves, was a dead letter, and led to no inference.

But now resuming the course I have hitherto followed, the anatomy of the fifth nerve points to curious results. We see that the motor division of this nerve goes first to the muscles which close the jaw and give it the lateral or grinding motions. Secondly, we see that it is distributed to the muscles of the cheek, which place the morsel under the operation of the teeth; and thirdly, we find it going to the muscles which open the jaws.

We proceed to the second method of proof, by experiment. Does the fifth nerve move the jaw? Is it indeed the manducatory nerve, as suggested by the anatomy? Let the following experiments determine the fact.

Experiment I.—The root of the fifth nerve being exposed in an ass, and irritated, the jaws closed with a snap.

Experiment II.—The fifth pair being divided in an ass, the jaw fell relaxed and powerless.

If we consider the action of mastication, we shall see what the consequence would be were there no accordance between the motions of the lower jaw and the cheeks. Conceiving that there must be such an accordance, and contemplating the roots of the fifth pair and their distinct functions, I had imagined that this office was performed by

the branches of the second division of the fifth. But finding that the connexion between the motor root and the superior maxillary nerve proved to be only by cellular texture, and considering the affirmation of M. Magendie, and those who followed him, that the infra-orbitary branch had no influence upon the lips, I prosecuted with more interest the *Ramus Buccinalis Labialis*. And nobody, I presume, will doubt that the distribution of this division confirms the notions drawn from the anatomy of the trunk,—not only that the fifth nerve is the manducatory nerve as belongs to the muscles of the jaws, but also that it is distributed to the muscles of the cheek and lips, to bring them into correspondence with the motions of the jaws. Let us take in illustration the articulation of the bones. In the joints the muscles are attached to the capsular membrane in such a manner as to draw it from between the bones and adapt it to the degree of flexion of the joint. If the cheek were a passive membrane, like the capsule of a joint, it would have required some such mechanical connexion with the jaw, or its muscles, as might have drawn it from between the teeth in the motions of mastication. But being a muscular part, to bring it into just relation with the motions of the teeth it must have an accordance through nerves, and act in sympathy;—relax when the jaws are apart, and contract when they are closed. I think, therefore, we may perceive why a branch of the motor nerve of the muscles of the jaws sends a division to the muscles of the cheek and to the angle of the mouth.

By such a process of reasoning we see also why a branch of the same nerve should prolong its course under the chin to the muscles which are opponents to those which close the jaw.

In short, the motor portion of the fifth nerve sends no twigs with the ophthalmic division, nor the superior maxillary nerve, but only with the lower maxillary nerve. To the muscles of the lower jaw alone, which are in action during mastication, and to the muscles necessarily associated in that action, the manducatory nerve is distributed.

It remains only that we observe what takes place in man, and compare the circumstances with experiments on brutes.

I was consulted in the case of a lady

with an uncommon disease in the side of the head: the description of her condition puzzled me very much; there was so much said of tumors with pulsation on the head and face. But when I saw and examined her, the mystery disappeared; she had powerful spasms of the temporal and masseter muscles, which rose and swelled, under the excitement of a disease of the cheek, and with a pressure of the jaws so powerful as to displace the teeth. During this violent spasm of the muscles supplied by the fifth nerve, the motions of the features were free and unconstrained under the influence of the portio dura of the seventh nerve.

I have the precise counter-part of this morbid condition of the muscles of mastication in the case of a poor man now under my care. He has a disease affecting the fifth nerve of the left side, attended with the loss of sensibility of the side of the face and of the surfaces of the eye. In him there is no motion of the muscles of the jaw of the affected side. In chewing, the action is only on the right side of the head; the masseter muscle and temporal muscle of the left side do not rise or bulge out as in their natural actions; but his command over his features is perfect, through the operation of the portio dura. It appears, therefore, that the disease of the fifth nerve, which has destroyed the sensibility on one side of the face, has caused a loss of motion in the muscles of the jaw on the same side.

A more frequent occurrence, establishing the distinction of motions influenced by the fifth and seventh nerves, is presented in the case of paralysis of the portio dura; for then all the muscles waste but those supplied by the fifth. In the case referred to, of the man wounded by the horn of an ox, in whom the portio dura was torn, and who had the skin of his forehead, side of the nose, cheek and lips, deprived of all fleshiness and substance, and in fact wasted to mere skin; the muscles of the jaw were entire and prominent; and on introducing the finger into the mouth and making him imitate the motions of mastication, a weak contraction could be felt in the cheek.

These facts close the evidence of the fifth nerve being a double nerve; not only the nerve of sensibility to the head and face, but a muscular nerve to the muscles of the jaws, active in mastication,

and otherwise useful in all animals whose jaws are prehensile and used as hands. This curious fact, originally drawn from the anatomy and now confirmed by it, had nearly been obscured by experiment; since the external branches of the fifth nerve, those most exposed to the experimenter, are not muscular.

I am bound to acknowledge here the correction of M. Magendie, in regard to the office of the sub-orbital division of this nerve, since it has given occasion to the revisal of the anatomy.

We were involved in great confusion by the discovery of new branches of nerves and of ganglions, through which we had no guide, until we formed a correct arrangement of the whole system. It is satisfactory to find that the ideas first suggested by a comparison between the roots of the nerves and their complex distribution in the face and neck are correct, when tried by a minute investigation of the internal nerves of the head; and that the conclusions drawn from the anatomy are confirmed both by experiment and by a knowledge of the effects of injuries and of disease in the human frame.

ADDITIONAL NOTE.—As the most important fact in this paper is that ascertained by experiments on the fifth nerve, I am bound to say by whom they were made, and for what purpose.

To my late brother-in-law, Mr. John Shaw, whom I educated, I have been indebted through the whole of this inquiry. He had long been acquainted in the most intimate manner with my pursuits. He had repeated my experiments on the roots of the spinal nerves, confirming the results—that the anterior roots, when irritated, caused the muscles to contract, and that the posterior roots had no such influence.

He assisted me in my experiments on the nerves of the face, which were for the purpose of establishing that the fifth pair resembled the nerves of the spine, and at the same time proving, what was incomplete from the experiments on the spinal nerves, that a ganglion on one of the roots of a nerve is no cause of interruption to sensation, but the sign that it bestows sensibility; making certain what could be only assumed from the experiments on the spinal nerves.

But he was acquainted also with my

opinions drawn from the distribution of the nerves in the body, contrasted with the anatomy of their roots; and when the correctness of these opinions was established by experiment, he let no opportunity pass of advocating and supporting them. In collecting information and making dissections, he was ever active, as all the real students educated with him will testify. It was in the fervor of his zeal that he went to Paris and explained the arrangement by which I distinguished the nerves, and repeated my experiments with M. Magendie and others at Charenton, near Paris, in 1821.

At this time an idea was thrown out that the fifth nerve was no more than the sensitive nerve of the face, accidentally separated from the muscular nerve (the portio dura). Perceiving that if this notion prevailed we should be thrown back into our former state of confusion, and to put the matter beyond all question, Mr. Shaw performed those experiments which are contained in this paper—experiments which, in the gentleness of his nature, he would have hesitated to make, from their severity, but for their being imperatively called for.

Had Mr. Shaw lived, this subject would have been further advanced. Whilst his excellent judgment and indefatigable exertions aided me in every difficulty, his gratification in witnessing the progress of these inquiries was a reward beyond what I have now to look for*.

ESSENTIAL OIL OF COPAIBA.

To the Editor of the London Medical Gazette.

SIR,

You will do me the favor to call to mind, perhaps, that some time since I had the honor of submitting for insertion in the Medical Gazette, a paper on the employment of the essential oil of copaiba in gonorrhoea, and other discharges from the urethra and vagina.

* Slightly condensed from the Philosophical Transactions, 1829.

This paper you will also recollect was lost or mislaid by the printer*.

I should not again trouble you on the subject, did I not believe the article in question to be a valuable addition to our materia medica, and did I not anticipate its enjoyment of the full confidence of the profession.

When Mr. Thorn introduced to the public his resinous extract of copaiba, it occurred to me that he had been at great pains to get rid of the most active, and perhaps only active principle of the drug; and it appears clear that if any praise were due to the resin, it could merely be awarded when it still retained some particles of oil. Without offering any injustice to Mr. Thorn's remedy, it may be safely asserted that these suppositions have been fully verified. The unqualified power given to it has not been recognized; and the ample trials it obtained failed, unfortunately, to establish a right to any confidence whatever.

Mr. Thorn's modification, in the form of exhibiting this nauseous but valuable medicine, certainly entitled his extract to every respect, and the failure is much to be regretted; but if it shall be found that the essential oil can be employed with absolute benefit in the same unobjectionable form, our regret may be lessened, and I have only to hope that it will be tried to the same extent as its predecessor.

Some months since, Messrs. Lowe and Johnson, of Bishopsgate Street, sent me a specimen of essential oil, with a request that I would seek into its efficacy. I gave it immediately, in several cases, with manifest success. Some of them I took notes of; and on sending my paper to your publishers, destroyed my own copy. As I have only the notes of one other case, I can scarcely support my assertions by any thing like proof; but this case I will take the liberty to offer as a sample of the whole.

Mr. R. P——e contracted a gonorrhoea in the latter end of November. When he applied for advice he had the usual symptoms of the disease; the scalding and discharge were both consi-

* We are not absolutely certain where the blame lies; but we remember having set the paper aside among those intended for publication; and of the very many communications which pass through our hands for this purpose, it is the only one to which an accident of this kind has occurred.—E. G.

derable. He was ordered, *Ol. Ricini*, ℥j. To drink gum-water and linseed-tea, and to take the following:—

R *Ol. Ess. Copaib.* ℥xxiv.
Sapon. Hespan. ℥ij.
Pulv. Gum. Tragar. ℥ss.
M. bene. et. ft. Pill. xij. iij. ter in die sumend.

On the 4th of December he stated that the scalding and discharge both had lessened; but he complained much of chordee as being very troublesome in the night.

Cont. Pil.

R *Pulv. Doveri.* gr. x.
Pulv. Camph. gr. v.
M. fiat Pulv. hora somni omni nocte sum.

8th.—The chordee was effectually relieved by the powders; the discharge much abated.

16th.—The discharge has quite disappeared. The patient was ordered to continue the pills for eight days, and gradually to lessen the number taken for each dose. I have seen him this day, and he states there has been no return of the discharge.

Thus I judge, from the above case, and from many others equally strong, that ℥vj. of the essential oil, given for each dose, is sufficient for the cure of gonorrhœa; and thus I conceive the small quantity above named to be equal to the usual dose of the balsam—viz. ℥xxx. I would not assert that ℥vj. will suffice in all instances, but I am quite sure that ℥x. will prove the maximum dose. And not only do we obtain this important reduction as to quantity, but we are able (by the formula above offered) to exhibit that in the form of pill.

The first case in which I administered the essential oil was that of a woman who had gonorrhœa: I gave it in the liquid form.

R *Ess. Ol. Copaib.* ℥x. *Aquæ.* ℥j. ter die.

But after the first dose, violent sickness was produced; yet it is singular that though the medicine returned, the discharge should have considerably decreased. I then ordered—

R *Ess. Ol. Copaib.* ℥v.
Sodæ. Carbonat. gr. x.
Aquæ. ℥j. *M. ter die sumend.*

The mixture was now retained, and

the addition of the alkali appears in this and subsequent cases to have prevented even the nauseous eructations which almost invariably follow the administration of copaiba in any form. First, as the discharge had ceased, wanting “fresh supplies,” I was obliged to give the balsam; and though ℥40 were ordered for each dose, the complaint reappeared with its pristine violence. The woman herself begged for “the other stuff,” so convinced was she of its efficacy; and under the exhibition of “the other stuff” she completely recovered*.

My next case was that of a midshipman belonging to the H. E. I. C. ship *Prince Regent*. He had simple gonorrhœa, and was cured by the essential oil in about fifteen days. I gave it, in combination with the carbonate of soda, as above.

I then had an opportunity of exhibiting it in the case of a gentleman who had been teased by a gleet discharge for two or three years. He had taken the balsam, I might almost say, wholesale; and had used the “most approved” astringents as injections; but the discharge seemed to bid defiance to all the articles of the *materia medica*. This was one of the cases stated in my former paper, the notes of which I unfortunately destroyed; but I think the essential oil was given in doses of ℥viiij. (certainly not more). The gleet disappeared in a few days, and has not since returned. I should state, however, that the patient was enjoined to abstain from all excitement for a time, both physical and moral.

I offer these observations with much diffidence, and I beg that they may be received “cum grano salis.” I must be allowed, however, to express my own conviction of the power and efficacy of the remedy; and to state my assurance that no one who yields it a trial will affirm that its merits have been exaggerated.

I may state, in conclusion, that some difficulty was experienced in the reduction of the oil into the form of pills. I believe, however, the formula I have given will be efficient; and the carbonate of soda, if found useful, may accompany them in a draught. The ar-

* This patient was under the care of Mr. Coulson, at the General Dispensary, to whom I stand indebted for other opportunities of employing the remedy.

ticle has been carefully prepared by Messrs. Lowe and Johnson, and is sold by them (I think very reasonably) at 30, Bishopsgate-Street Without.

I have the honor to be, Sir,

Your obedient servant,

J. G. EVANS.

18, Finsbury-Place South,

Finsbury Square.

Jan. 2d, 1830.

SMALL-POX AFTER VACCINATION.

To the Editor of the London Medical Gazette.

Fleet-Street, Dec. 13, 1829.

SIR,

So much has been said and written upon the seat and nature of small-pox, and the effect of vaccination in preventing altogether, or modifying its attack, that some apology is due for intruding myself upon your notice; but having met with four cases within four months, all occurring after vaccination, I have sent you a statement of them, believing you will think them worthy of a place in your Journal. In no case did there appear any thing to account for the attack, or any exposure to contagion. The first occurred in a young man occupied in a large shop, amongst a considerable number of others, yet he alone was singled out for the disease, and he alone suffered, neither of his fellow-shopmates being affected either at the time or after his return to his employment amongst them. In the second case the attack is alike unaccounted for. A gentleman, in no way exposed to infection, had a most aggravated form of the disease. He described to me a presentiment of some fever coming on for at least two months before it made its appearance; and two days before he was seized, he had held a long argument upon the nature and effects of vaccination. The third case is that of a child which suffered severely from the disease, and eventually fell a victim to it. The fourth is that of a young woman who had the disease very mildly, but its commencement is equally unaccounted for.

I am, Sir,

Yours obediently,

P. M. HOSKING.

CASE 1st.—Aug. 5th, 1829.—Mr. J.

aged 22, requested my attendance. He complained of pain in his head and back, with shivering and general languor. He still attended to his business, but with great inconvenience. I ordered him some saline medicine.

6th.—Fever increasing; and a slight eruption appears upon the face and breast, very much resembling chicken-pox. I now questioned him whether or not he had been vaccinated: he told me he had when a child, and that he had never had small-pox. I told him that he probably had small-pox now. His employers were very much alarmed; and he took lodgings in the neighbourhood, and removed immediately to them. To continue the saline medicine.

7th.—The eruption appears very thick upon the face, breast, and upper extremities, and he complains of sore throat. There is no doubt now of the nature of the disease. He has no considerable fever; and I consider, at least, it is modified by the vaccination. To continue the saline medicine, and ordered him a gargle for the throat.

8th.—Doing well; the pustules distinct, and filling well. The whole body is now affected with the eruption. Perstat,—and to take an aperient draught.

9th.—No bad symptoms, and the fever is very moderate; complains of tingling in his skin, but no pain.

On the 12th the eruption appeared at its acmé; the pustules were distinct, and well filled, with all the characters of small-pox. He complained of restlessness and want of sleep: I ordered him an anodyne at bed-time, and an aperient draught the following morning.

15th.—The eruption has almost entirely disappeared, and his strength is returning fast; he suffers no inconvenience excepting the discoloration of the skin. I ordered him some tonic medicine; on the 17th he paid me a visit, and has since continued quite well: he was not at all pitted. In this case the disease ran its course in six days with all the symptoms and characters of small-pox, yet it must be considered as modified.

CASE 2d, Oct. 21st.—I was requested to visit G. M. Esq. I found him with great febrile heat; pulse 120; skin very hot and dry; great pain in his head; and he described to me all the symptoms ushering in fever. He had a slight eruption upon the face and breast of no

marked character, but which I gave it as my opinion was small-pox. I learned also that he had been vaccinated when a child. I bled him from the arm to eight ounces, and ordered him some saline medicine. In the course of the day, I visited him in company with Dr. Roots, when he expressed himself much relieved by the bleeding; but the eruption was making its appearance very fast, and he complained of sickness. Dr. Roots agreed with me that it was a case of small-pox. Pulse 100. Ordered him the following:—

R Potassæ Carbon. ℥j. Acid Citric. gr. x. Syr. Croci. 3j. Aquæ Puræ 3xv. M. ft. haustus 4tis horis. sumend.

22d.—When we visited him to-day we found him exceedingly restless. Bowels constipated; had not slept during the night, and he complained of pain in his head. The pustules were becoming very thick on his face and upper extremities. Pulse 90.

Rep. haustus et habeat pil. c. Calomel. gr. ij. et haust aperient.

23d.—He has been very restless during the night, but the fever is considerably abated. The bowels have been freely opened, but his mind wanders at intervals, and there is great prostration of strength. The whole body is covered with eruption. Pulse 110.

Rep. haustus, et adde Liq. Ant. Tart. ℥xij.

R Ext. Papav. Alb. Ext. Hyoscyami a gr. x. M. ft. pil. ij. h. s. s.

24th.—Doing well; has dozed a little in the night, but is a little delirious at times; he complains much of his throat being sore.

P. et repetat haustus aperient.

R Mel. Boracis ʒi. Aquæ Rosæ, Aquæ Puræ, a. ʒij. M. ft. Gargar.

Dr. Roots took his leave.

25th.—The face is covered with very large and full pustules, which in some places have coalesced; the eyes much inflamed; throat exceedingly painful; deglutition almost impeded; still very restless, and powerless. Pulse 120.

Persistat

R Ext. Hyoscyami, Pil. Hydrarg. a gr. v. M. ft. pil. ij. h. s. s.

26th.—Great prostration of strength,

and he has been delirious through the night; fauces still very painful, and swollen, and he says he cannot feel his throat, nor is he conscious of swallowing. Pulse 120, but weak.

Persistat in usû haustus salin, et habeat haust. aperient.

27th.—He is more composed to-day; the bowels have not been opened. Pulse 110.

Persistat in usû haustus c. Liq. Ant. Tart. ℥xx.

28th.—The disease appears at its height, on some of the pustules a brown crust is forming, and there is an oozing from others, rendering the part exceedingly troublesome. The throat is better, but the bowels have not been opened. There is a very irritating and unpleasant discharge from the eyes, and they are nearly closed up by its becoming dry on the eyelids.

To have an opening draught immediately, and lotion for the eyes.

From this time all the unfavorable symptoms subsided, but as the eruption declined, the extremities became very much tumefied, and he was not able to walk for some days.

Nov. 3d.—I ordered the following:—

R Tinct. Hyoscyami ℥x. Acid. Sulph. dil. ℥x. Syr. Rhœad ʒss. Inf. Rosæ ʒi. Aquæ Cinnam. ʒss. M. ft. haust. ter die sumend.

The eruption is now scaling, or rather falling off in large crusts.

6th.—He is recovering fast, and is able to sit up, and walk about the room, although very weak. There is great tendency to constipation of the bowels, and the motions are very dark.

R Acid. Sulph. dil. ℥v. Inf. Gentian. co. Syr. Aurantii ʒss. Aquæ Cinnam. ʒss. M. ft. haustus, ut antea sumend.

13th.—He was able to go out, and has since continued well.

This was a genuine and well-marked case of small-pox occurring after vaccination, and over which it did not appear to have the slightest control. It was ushered in with all the symptoms of fever, and ran the regular course of small-pox without any modification. At the commencement of the disease there was the same hardness to be felt under the skin, and on the third or fourth day the same flattening and in-

ventilation in the centre of the pustule as is found in natural small pox, and on the ninth day it was at its height. Yet, notwithstanding these facts, and others which have come to my knowledge, I am convinced of the efficacy of vaccination in the majority of cases, especially should the vaccination have been effectually and properly performed, as I am disposed to think that in many of the cases recorded as occurring after vaccination, it will be found that there had been at the same time some deficiency in the vaccine pustule, and the consequent febrile symptoms attendant thereon.

CASE III.—Miss C. aged 5 years. When I first saw her, Nov. 6th, she had an eruption on the face and upper extremities very much resembling chicken pox, with slight febrile symptoms. I learnt that she had been complaining for two or three days previously, but nothing alarming until the morning of this day, when the eruption began to make its appearance, and I was requested to see her. She had been vaccinated when an infant. I ordered her some fever medicine.

7th.—When I visited her to-day I found the fever much increased, and I had no doubt but that it was small pox; the eruption was becoming general over the body. The bowels were constipated, and I ordered her some aperient medicines. From this time to the 15th the disease went on in the regular course of small pox, and I never saw a more aggravated case; the pustules were exceedingly numerous and large over the whole body, but she did not appear to suffer much. On this day, however, the pustules began to burst, and run into each other, flattening and forming a brown scab, which eventually covered the face; her breathing became difficult, swallowing painful, and the itching very troublesome; but she was at all times sensible; her eyes were permanently closed. In this way she continued until the 19th, gradually sinking, when she expired, a sad example of this frightful disease.

CASE IV.—Nov. 11th, I was requested to visit Mrs. F. a young married woman; she had been complaining some days with pain in her head and back, with shivering and lassitude. I ordered her some saline medicine.

12th.—To-day a few pimples appear on the face, but very scattered and indis-

tingent. I found that she had been vaccinated when a child, and indeed the scar was very visible on her arm.

The eruption continued to make its appearance over the body generally, but the pustules were of a very undecided character, and but a few had the form of the small-pox pustule; and on the fifth or sixth day they began to disappear. Within a fortnight from the first attack she had quite recovered, and had suffered very little inconvenience throughout.

LITHOTRITY.

To the Editor of the London Medical Gazette.

SIR,

I HAVE just had one of your numbers shown to me, in which it is said by a correspondent, that my system of operating for the cure of calculous patients had failed in several cases, and those of MM. Courtois, Désangiers, Delamontagne, Neurohr, Rivière, and Bocquet, are mentioned by name.

Permit me, Sir, to give some details of the cases named, which may perhaps prove useful to science, as far as they will place facts in their true light, and prevent being considered, as failures, operations, some of which have been followed by cure, and others not terminated, from circumstances altogether independent of the instruments or method employed.

M. Courtois was the first patient into whose bladder I introduced my instruments of lithotritry, and necessarily the greatest uncertainty and slowness accompanied this first trial. The operations were carried on at very long intervals, for between each of them I modified the instrument I had used, or constructed a new one. Yet these trials had the happy result of extracting from the bladder of M. Courtois a large quantity of "detritus" of stone. At the end of some months, whether wearied with a treatment, the length of which was the result of my then inexperience, or whether the suggestions of others determined his having recourse to another surgeon, M. Courtois applied to M. Civiale, who freed him from the remains of his calculi. As M. Civiale extracted these fragments without my knowledge,

and without doing me the honor to acquaint me with the circumstance, I cannot say if the quantity of stone extracted by him was as considerable as that extracted by me. At all events, M. Civiale soon announced the cure. M. Courtois was then cured by me and M. Civiale, a little irregularly, perhaps, on the part of M. Civiale, with regard to me. I can only, therefore, claim half the success in the case of M. Courtois; but, Sir, having performed half of a successful operation is no failure.

M. Désangiers, well known in France for his poetry, after having had in the course of his life seven acute nephritic attacks, applied to me to remove a stone which had been several years in his bladder. I found M. Désangiers with an inguinal hernia of the size of a child's head, with a canal large, but which did not admit of the introduction of an instrument exactly straight—the extremity required to be curved. I operated upon M. Désangiers with the “pince à forceps,” which then alone of my instruments admitted of this curve. The stone was immediately seized, excavated, and broken. So far the operation was successful; but as at that time I had only the “perce-pierre” of MM. Leroy and Civiale to destroy the fragments (which instrument does not admit of any curve at its extremity), I was unable to continue the operation, although I made several attempts to introduce it. M. Désangiers retained the fragments, and submitted, about a year after the last attempt, to the operation of lithotomy. This, then, was a case of exception, and his not being cured arose from a vicious disposition of the organs, not from a want of power in the instruments. The impossibility of introducing a straight instrument in the case of this patient was established by Drs. Marc, Marjolin, and Pasquier; and I possess, in proof of what I assert, a declaration signed by three physicians. The case of M. Désangiers cannot, then, be considered an unfortunate case, as regards lithotrity, because the patient died from the operation of cutting nearly a year after the last attempt.

M. Neurohr, a physician, of Landau, came to Paris to be treated for stone by lithotrity by M. Civiale, and applied to me. M. Neurohr, after riding on horseback, had passed some portions of a large stone, which had evidently broken spontaneously in the

bladder. Thinking that nothing existed in the bladder but the remaining fragments of this stone, he wished them to be extracted by the instruments of lithotrity; but, after having sounded this patient, I undeceived him, and announced to him that his bladder contained still a considerable number of stones, and that some of them were also of a considerable size. I advised him to have recourse to the operation of lithotomy. M. Neurohr, however, insisted upon giving a trial to lithotrity, alleging, with reason, that such trial, made with proper caution, could be attended with no bad effect; and that then I could form a more decisive judgment upon his case. Twice I applied my “appareil évideur à forceps” to the destruction of this patient's calculi, in presence of MM. Boyer père, Boyer fils, Pasquier père, Pasquier fils, Marc, and two or three German physicians. During these applications three stones, each of an inch diameter, were seized and broken; a fourth was submitted to the action of the “évideur,” when M. Neurohr asked me, during the action of the instrument, whether I thought there were other stones besides the one I was excavating? and received an answer in the affirmative. He then begged me to leave the stone unbroken, and announced to me that not being able, on account of his place, to remain in Paris long enough to be cured by lithotrity, he thought it better to submit to be cut.

This operation was performed by Baron Dupuytren in presence of MM. Deguise, Pasquier, Marc, Caillard, and myself. When they were extracted, the destruction effected by my instruments upon the stones, which were eight in number, and all of an inch in diameter, was visible. Three were broken, and the fourth, which M. Neurohr had begged me to let go, was yet unbroken, but hollow, like an egg. On this occasion I had the satisfaction to receive the compliments of Baron Dupuytren, who was so good as to say, when he extracted the last stone, that what he saw was wonderful. Thus the case of M. Neurohr cannot be presented as a failure; for the operation was discontinued from the fact alone of the will of the patient, and he submitted to be cut only from his not having it in his power to remain long enough for the destruction and expulsion of a great number of stones. The case of M. Neurohr is, on the com-

trary, one of the most striking facts I can give, as it shews the excavating instruments almost, as it were, in action. M. Neurohr was, besides, so little fatigued by the two applications of the instruments, that M. Dupuytren thought fit to operate upon him four days after the last.

M. Rivière, an old man of 82, had several stones in his bladder, which I submitted to the action of the excavating instruments. The operation succeeded perfectly, as far as breaking the stones, but another circumstance soon made me determine upon giving up the operation. The bladder of this old man had not sufficient power to expel the urine, and, consequently, the fragments. I undertook, at first, to extract them by means of a catheter with large eyes, but I soon gave up this, on account of the considerable quantity of stones which existed in the bladder. At the expiration of some months, this patient submitted to the operation of lithotomy*. Thus, this case cannot be brought forward as a proof of want of power in the instruments employed; for, whatever instrument had been used, this patient could not have expelled the fragments more easily.

M. Delamontagne, also a physician, applied to me to extract from his bladder a stone, of which he had felt the first symptoms eight years before. As soon as I had introduced an instrument of lithotritry into this patient's bladder, with a view to examine it, I discovered that this organ presented a very faulty disposition, and that if the action of seizing the stone was not impossible, it would be at least very difficult, and distressing to the patient. This organ presented very little space from the neck to the fundus, and was, on the contrary, extremely wide, so that the instrument, when introduced and opened, touched with difficulty the stone, which, although of considerable size, escaped on the sides of the bladder, and became absolutely inaccessible. This reason induced me to advise lithotomy to M. Delamontagne, who wished, before

making up his mind to this, to have a consultation. This consultation took place, and was composed of the Baron Dupuytren, of M. Leroy (d'Étiolles), the inventor of the three-branched instrument, and of M. Caillard, the physician and friend of M. Delamontagne, and myself. At this consultation I openly declared myself against every attempt at lithotritry. I was alone of this opinion, and I could not refuse, urged by the other physicians and the patient himself, to make two fresh examinations, in which, as I had foreseen, the stone, always placed laterally, could not be seized, either by myself or my confrère, M. Leroy (d'Étiolles), who had the goodness to put to the proof this impossibility. Thus, this case cannot be regarded as a failure, for the operation was never begun. M. Delamontagne was afterwards cut by M. Dupuytren with the greatest success. So far was the introduction of the instruments from aggravating the state of the patient, that, on the contrary, it diminished his sufferings so much, that it was only at the expiration of six weeks, when the pain caused by the stone returned, that M. Delamontagne decided upon undergoing the operation.

With regard to M. Bocquet (not Rochet), I am inclined to think that your correspondent has been led into error, as there never was the least idea of submitting this patient to the operation of lithotritry. M. Bocquet had a considerable stricture of the urethra, a chronic catarrh of the bladder, and several small stones. He could only pass his urine by introducing an elastic gum catheter into the canal, in order to push back into the bladder the small stones which entered the passage as far as the stricture, and formed a complete obstruction. One day, when he had introduced the sound as far as the bladder, a stone placed itself between it and the canal. The patient, urged by his desire to make water, pulled the catheter with violence, which caused the perforation of the canal behind the stricture, from the pressure of the stone against it by the sound. An infiltration of urine followed, which proved fatal. The case of M. Bocquet is then no proof of the insufficiency of my instruments, because they neither were applied, nor ought to have been applied.

Although it is always useful to correct errors when they exist, I should

* I have met with this want of power to expel the fragments in two other cases, M. le Docteur Héron of Paris, and M. Besancenot of Versailles. In the first case I brought out the fragments by means of the catheter; in the second, I succeeded in causing them to be expelled by exciting the contractibility of the bladder, by rubbing the pubis and perineum with the "Pommade Phosphorée de Lescot." Both these patients were cured.

not have written this long letter, had I not thought it right to take this occasion of offering you some details of interest. Of all the facts which the art of lithotrity presents, the most important to be known are those which lead to appreciate the circumstances which may have prevented the successful result of this new method of cure of calculous patients; and you will see that in some cases these circumstances are independent of the surgeon, and of the instruments which he uses. I feel happy that the publication (perhaps rather indiscreet) of the names of some of my patients has given me an opportunity of doing what may prove useful, as I am enabled to give a scientific character to this explanation of facts.

I cannot suppose, in the publication of these names, any wish to question the justice of the decision of the institute of France, which judged my labors worthy of one of its greatest and most honorable rewards. This would be unjust towards the good sense of your correspondent, for the facts of which he speaks, even had they been failures, took place long ago, at a time when those of my labors which have brought the operation of lithotrity to the degree of perfection to which it has now attained, did not yet exist. Such facts, then, could prove nothing against the system of operation which I now employ. I might, with more reason, oppose to the operation, as practised by M. Civiale, the very numerous cases in which the slowness and want of energy of his process have obliged him to renounce the continuation of the operation.

You see how much, sir, a system of discussion leads to errors of importance; for besides that such a system is unworthy of science, (as your correspondent says, although, notwithstanding his opinion, he appears to make use of it), it always leads to the putting of persons in the place of things, and whenever this happens, the passions take their part, and science is the loser: for in the place of labors which might tend to throw a light upon it, the records of science overflow with discussions devoid of end or interest, and which have not even the merit of clearing up those little questions which arise from the clashing of private interests and individual self-love.

I have the honor to be, Sir,

Your obedient humble servant,

HEURTELOUP, D.M.P.

P.S.—There are few surgeons in Paris who operate for the stone, who have not met in their practice with patients upon whom the operation of lithotrity, by means of the instrument "perce-pierre" of MM. Leroy and Civiale had been attempted without success. The greater number of stones extracted have been found simply perforated, and still entire.

M. Toubertbielle, lithotomist of Paris, had in his possession a year ago fourteen examples, which he at that time presented to the Academy of Sciences, and which he has published. It is certain that these failures were caused by the insufficiency of the instrument, because all these operations of lithotrity were attempted by Dr. Civiale, who is perfectly practiced in its use. If it is remarked that many of these patients were in a very favorable condition, both as regarded their general health and the state of the urinary organs, because many of them were thought fit subjects for the operation of lithotrity, and underwent several applications, it will be readily conceived that nothing more was wanting to effect their cure than more active instruments; and that if, instead of a single perforation of the stone, it had been reduced at once to fragments, which could again be rapidly broken up, these patients might have escaped the operation of cutting; and this effect I obtain by means of my instrument "évideur."

For more numerous and authenticated cases it is only necessary to consult the work of M. Civiale, where it will be seen that this surgeon has been obliged to abandon many patients, and that many have died after his attempts. M. Paillé, page 150; M. Gobert, 149; M. Demise, 154; M. Furgot, 155; M. De Vaucelles, 159; M. De Bournon, 36; M. Aumont, 157; M. Leblanc la Vallière, 31; M. Quartain, 159; M. Carpinter, 215. Might I not add those who have been only examined by the instrument, of whom one, M. Montusa, page 15, died after the examination. We find also in this work, M. Tacher, page 12; M. Vincent, 19; M. Fayon, 20; M. Faure, 21; M. Labbot, 58; M. Cornu, 116; M. Fournier, 129; M. Jules Ferin, 204; who died after having been operated upon by M. Civiale.

If we wish to consider the influence upon the health, which a treatment so long as that which results from the ap-

plication of the "perce-pierre" is likely to have, we have again only to consult this work, and we shall find that half of the patients cured have had bad symptoms during the cure. Now my operations are very rarely followed by any bad symptoms, febrile or others; and this advantage I obtain from the rapid action of my instrument upon the stone; from the little movement I am obliged to make in the bladder; from the delicacy of management which the easy position of the patient, and my own, which is free from constraint, admit of; and, lastly, from the fixity of the instrument during the destruction of the stone. When some articles are published in detail no doubts will any longer exist on this head.

THE PHYSICIAN AND APOTHECARY.

To the Editor of the London Medical Gazette.

SIR,

THE letter of Mediculus, by which term I judge him to be a young physician*, or a student of physic, is written in a style which reflects credit on his taste, his morals, and his candor; I may add, on his benevolence, and his freedom from a selfish and undue *esprit de corps*. If I understand his letter precisely, it is an exhortation to the general practitioner to make the most of his opportunities of becoming an influential member as to rank in our profession; and the main reason why he is not on a par with the physician, according to the view of Mediculus, is his comparative deficiency in the acquisition of classical literature. I differ, unwillingly, from the sentiment of this amiable writer. First, because a great number of our physicians themselves have not to boast of classical acquirements; they have not more knowledge of Latin than has enabled them to procure a Scotch degree. Secondly, because I think the form of trade pursued by the general practitioner must ever, whilst society is constituted as at present, be against him. I am no "leveller;" I have no desire

to blend the various departments of our calling into a common mass; I have a desire to make the apothecary as reputable as he can be; but there is somewhat so essentially minor in the reception of eighteen-pence for a draught than the pocketing a guinea for a prescription, that I hold that the social condition of this country must be the very reverse of the present before the two practitioners can be equally respectable in the sense of rank. Whether the condition of society is what it ought to be, is a separate question. As the minds and morals of men work now, I, for one, am anxious for no alteration. I do not know that I wish it under any imaginable circumstances. I have never seen any convincing argument wielded by those men who seem to me to covet a change, merely because at present the rank of others is somewhat above their own. Indeed, I have never been convinced of the possibility of equalizing the physician, or the "pure" surgeon, with him who is "obstetrix, medicus, chirurgus, pharmacopola." I speak of the physicians as a body; of the general practitioners as a body. Individuals may contest for personal fame, and the apothecary be the greater man—greater, from personal acquirements. Mason Good, the apothecary, was not bettered by the assumption of a degree. It would have been absurd if any man who had the honor of intimacy with that general practitioner, respected him still more when nothing was added to him but a name; absurd to have deferred less to him—the linguist, the classic, the man of science, than to a young gentleman, called doctor, because he was not plucked at Edinburgh.

I repeat, that I wish the apothecaries, as a corps, may attain the summit of possible respectability; but from this summit they are kept down by other causes than any want of literature. They are truant from their real capabilities; they are unjust to one half of themselves—they are surgeons as well as pharmacopolists, at least many of them. I hold that a general practitioner—a member of a college of surgeons, should ever remember his better half; and never degrade his surgical character by turning surgery into that retail which is inseparable from pharmacy. Yet I have heard of a surgeon and pharmacopolist charging for a capital operation;—whom?—a person so poor

* We are not absolutely sure, but we suspect that Mediculus is a general practitioner in the city of London.—E. G.

that the sum was made up by drib-
 blets from the neighbours! This I
 take to be the influence of pharmaco-
 polism on a mercenary mind, which
 the dignity of surgery, *per se*, failed to
 restrain. Every thing is being done by
 persons who have the wish to make
 pharmacy reputable, which they can do.
 The society of apothecaries has been
 loaded with calumny and dirt; but the
 hands that have flung it have not been
 clean. The principle which swayed the
 society was incontestably good; the
 improvement of their corps, and the
 consequent benefit of his Majesty's
 liege subjects. They have partly suc-
 ceeded and partly failed. They have
 succeeded with those gentlemen who,
 studying for general practice, qualify
 themselves also for membership of a sur-
 gical college. They have failed with un-
 principled and plebeian persons, who,
 having obtained the legal sanction of
 the Hall to practise pharmacy, care not
 to pass the College of Surgeons because
 they cannot be compelled. If, in this
 country, pharmacy was practised
 "pure," all would be well. But every
 child knows that, saving the physicians
 and metropolitan surgeons, all besides
 are general practitioners. Hence a his-
 tory like the following I suspect to be
 common. A young fellow, who has
 served behind the counter of a village
 apothecary, and no more, posts up to
 London, and qualifies for pharmacy.
 Having done his half-year's needful,
 and passed the Apothecaries' Hall, he
 gallops back to some country town,
 screws on his brass-plate of "surgeon,"
 and forthwith commences his triple
 mode of warfare against his kind with
 knife, pills, and forceps. Now what
 should be done with such a person?
 Surely he should be disowned by the
 medical fraternity *en masse*. What is
 done? The physician meets him in
 practice, and recognizes him as a brother
 Ιατρός, "because he is a lawful apo-
 thecary." The surgeon meets him be-
 cause the man often requires surgical
 assistance, and the surgeon as often a
 fee. This I have seen and have lament-
 ed. One would have thought the real
 surgeon, for the honor of his cloth,
 would have disowned this really general
 practitioner. It is such mercenary con-
 duct which induced, in the mind of Na-
 poleon, that acute observer of the worst
 part of human nature, his vast contempt

of surgeons. In one of the conspiracies
 against Buonaparte, a list of the conspi-
 rants was presented to him. "Amongst
 them," said he, "I saw the name of a
 surgeon. This man, said I, shall be my
 clue to the whole business. Now, I am
 sure, this man *can* have no other motive
 than *lucre*;" and he boasted to have suc-
 cessfully bribed him. But in the re-
 motest period of Grecian history merce-
 nary surgery was not unknown. That
 eminent operator, Æsculapius, the Sir
 Astley Cooper of his day, who obtained
 a higher reward than a baronetcy—a
 peerage among the Gods—Æsculapius,
 let down the profession sadly in
 the estimation of the Theban bard.
 Having described the marvellous cures
 of ulcerations, sabre wounds, coups
 de soleil, gangrene from cold, and so
 forth, effected by that great surgeon;
 how he cured some by adhesive plaister—
 γυλοῖς περιέπτων πάνταδε φάρμακα,—and
 others by the knife—τοὺς δὲ τομαῖς ἔστα-
 σεν ὀρθοῦς,—Pindar goes on to say—
 Ἀλλὰ κέρδει καὶ σοθία δέδεται—but even
 he prostituted his skill for lucre.

It certainly does appear imperative on
 the Royal College of Surgeons to make
 another attempt at legislative interfe-
 rence, or to come to some understand-
 ing with the Apothecaries' Society,
 whereby those persons who intend to
 avoid the diploma of the College may
 be subjected to a most severe examina-
 tion at the Hall, if lawful, on surgery,
 provided they can be known to meditate
 general practice. Or let them allure by
 hope, if they cannot terrify into a fitting
 course of surgical studies;—let them imi-
 tate the example of our scientific neigh-
 bours, the French, and bestow the
 diploma of doctor of surgery on their
 members. Numbers will be allured by
 the honey of a title, whom neither in-
 clination nor conscience would induce
 to prepare themselves for the responsi-
 bility of human lives.

I am, Sir,

Yours at command,

A SURGEON, APOTHECARY, AND
 MAN-MIDWIFE.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

Practical Remarks on Amputations, Fractures, and Strictures of the Urethra. BY STEPHEN LOVE HAMMICK, Surgeon Extraordinary to the King, and late First Surgeon of the Royal Naval Hospital at Plymouth. 1830.

In reviewing or perusing a book it is right to keep in mind the circumstances under which it has been written, as well as the particular objects of the writer. The volume before us is in these respects somewhat different from those that usually fall under our notice, consisting of observations, originally made, in the form of “lectures and clinical instruction,” delivered to the junior medical officers and pupils at the Naval hospital, Plymouth; and this form they have been allowed to retain. Mr. Hammick has had very extensive opportunities of acquiring a practical knowledge of his profession, nor have these been suffered to pass unprofitably; on the contrary, the volume bears abundant evidence of the writer being perfectly familiar with the different subjects which he handles.

We shall select a few specimens connected with amputation and fracture, which we think will prove interesting even to the practised surgeon, and which cannot fail to be useful to the less experienced.

Amputation of the Thigh.—All the usual preliminaries being adopted, and the operator armed with a knife of the “largest size,” he is recommended to make a circular incision through the integuments only, which are then to be forced up by the assistant for about half an inch, but never turned back. The author then continues:—

“Let your next incision go boldly all around through the first layer of muscles, close to the edge of the drawn-up integuments, the assistant still pulling upwards,—so that the next cut of the knife (which should be applied about an inch and a half to two inches higher up than you made your incision through the integuments) is to reach down to the bone, the muscles adhering to which are to be separated by the point

of your amputating knife, so that your leather retractor may be applied about another inch higher up, more or less, according to the size of the thigh; and when your assistant has placed the retractor, should any portion of muscle be in the way of the saw, divide it with the same knife, taking especial care not to detach the periosteum, but just sufficient to allow of the working of your saw without lacerating it.”

These directions, though sufficiently simple, are not always attended to in practice, so that we have exfoliations from denuded bone, or the healing of the stump retarded by portions of the muscles or periosteum sloughing, if they have been lacerated.

The degree to which the integuments are to be put on the stretch varies according to the muscularity or emaciation of the patient; indeed, if he be greatly attenuated, the first incision may go right down to the bone at once. The object is, however, under ordinary circumstances, to detach the integuments from the muscles only just sufficiently to allow of their meeting in an exact line on the face of the stump, taking care to leave muscle enough to form a good cushion, and to saw the bone high up.

“To accomplish these three points, you see that the integuments are put well on the stretch, so that the first circular incision frees them so as to allow of their being drawn up about an inch from the muscles underneath, so that the muscles may be cut through about this space higher up than the integuments, which will allow of their meeting on the face of the stump; whereas, by dissecting back too freely the integuments, you cut off the communication between them and the muscles, leaving for the nourishment of the former only the cuticular vessels, without being able to get any support or supply from the parts underneath, and in consequence you must remove, or what I call scoop out, too much of the muscular substance, so that there is hardly any left to cover the end of the bone, having a great cavity in front of and between it and the integuments, whereas by leaving a good quantity of muscle, and sawing the bone high up, should the stump not heal by the first intention, the bone at all events will not be seen again, as a sufficiency of muscle will have united to conceal and protect its end; and when there is a profusion of integuments and

scarcely any muscle, the adhesion of the incised edges of the integuments will be so imperfect or so slight, that the lips will give way, and if they do the bone will be seen; the muscles having been so much removed, that it will protrude, and frequently a portion of it exfoliate, or may be, terminate in necrosis. There should be left in a stout thigh about two inches of muscle in thickness, to cover the bone, and only just integuments enough to be brought with a little exertion into exact contact in a line in front of the stump; and when all this takes place, you will have no reason to be dissatisfied with your operation."

Among other amputations, that at the shoulder-joint is spoken of; and we allude to this part of the subject for the purpose of mentioning the caution our author gives against its too hasty performance. The surgeon, he observes, ought to reflect well whether it be not practicable to avoid this operation by leaving the head of the bone, and with it the capsular ligament, untouched, and sawing through the humerus close to its neck; and this is advised, not because extirpation at the joint is much more dangerous, but because so many muscles are detached as to make the patient ever after lean to one side—the body, as it were, becoming awry. Another reason for operating lower down, if possible, is, that recourse may subsequently be had, if requisite, to amputation higher up; but if the shoulder-joint stump turn out ill, there is no such alternative left.

Ligatures.—The author adverts to the great change that has taken place in practice with regard to ligatures; formerly very large ones having been used, and now the great arteries being sometimes trusted to a single silk. This last method, however, Mr. Harnnicks decidedly condemns, as subjecting the patient to a great risk without any proportional advantage. He thinks that the larger ligatures both secure the vessel more effectually at the time, and are more easily got rid of when they cease to be necessary.

"Frequently these single silks have been retained on the vessel for many months after every other part of the stump had been healed, excepting a small fistulous opening, and these could often not be touched or any attempt made to take them away, though of the gentlest kind, without exciting intolerable pain, and yet these ligatures had been put on by the tenaculum. Two

years since I attended an amputation of the thigh of a youngster fourteen years of age, where the surgeon secured all the vessels with single silks, three of which remained on for ten months, there being a fistulous opening, and at length they appeared to rot away, as no part of the noose or knot could be discovered; the stump, however, healed, and has remained well ever since, but during the period of the retention of the ligatures great pain and alarm were felt by the lad and his relations.

"In another case where the single ligature came away, leaving the knot, the stump healed without any further trouble, but in three instances, two of them amputations of the upper arm, where both ends of the ligature had been cut off close to the vessel, and where the edges of the wound were attempted to be closed, regardless of any extraneous body being left on the arteries, small troublesome abscesses succeeded one another for many weeks, creating a good deal of disturbance and anxiety."

The ligatures recommended are either fine silk or thread, from one to eight in number, a little waxed, so as to admit of their assuming a round form.

Removal of the Tourniquet—The following suggestions deserve attention:—

"Having satisfactorily secured all the important arteries of the stump, boldly unscrew the tourniquet, so that the blood may come down with a sort of rush, and you will immediately afterwards see the ligatures in movement by the pulsation of the arteries; then secure any of the smaller ones that may require it. My object in rapidly unscrewing the tourniquet after the large arteries are secured, is, that the rush of blood may force any of the secondary ones which may have retracted during the operation into the muscles, to bleed; otherwise they may lie concealed and undetected until the patient has been two or three hours in bed; when, reaction taking place, from the fear of the operation having subsided, and the rallying of the system from the loss of blood and faintness, hæmorrhage comes on, and you are frequently obliged to open the stump to secure the vessel: if not, the blood thrown out forms a large cake, acting as an extraneous body within its lips, preventing union, not only by the first intention, but frequently doing much more mischief; particularly if it be in a stump where there has

been preserved too much integument and too little muscle. Now, what is the effect of a cautious and gradual slackening of the tourniquet, which you see so commonly done? Why, that the face of your stump becomes a bleeding surface, so that innumerable vessels are tied. How common is it for the surgeon, after having secured all the vessels he could get hold of, whilst the tourniquet was tight, to hear him say to his assistant, 'Pray, unscrew very gradually; but mind you stop the very moment I tell you.' Well, after being slackened a turn or two, an oozing takes place all over the stump, and the surgeon immediately cries out for the tourniquet to be screwed tight, as the patient is bleeding fast. Now, mark what he has done: he has just slackened the tourniquet enough to allow the blood to pass down by the important arteries, and has kept it quite tight enough to prevent the blood getting back by the veins, or the anastomosing branches, so that the whole is rendered a bleeding surface; and a timid surgeon will go on securing vessel after vessel, to his own astonishment, the greater part of which need not have been touched; and the hæmorrhage would have ceased on boldly taking off the tourniquet, and spunging the face of the stump with cold water."

Bleeding Veins.—Sometimes the femoral, or some other large vein, bleeds freely. Under these circumstances, Mr. Hammick "never hesitates a moment" in placing a ligature upon it; and he has "never found the slightest danger to arise from having done it."

Fractures.—The most common fracture of the thigh is about its "middle third." In this case the author recommends the patient to be laid so as to rest on the great trochanter of the injured limb, the knee being brought up at a right angle with the body. The usual apparatus of bandages, regularly folded over the parts, are applied, and the limb covered with a cold lotion till the inflammation is perfectly subsided, which is generally about the eighth or twelfth day, when the process of *setting* is thus conducted:—

"After removing the short straps, and laying the thigh perfectly bare, I tell the patient that he is to assist in getting over completely on his back, bringing the nates fairly and flatly into the middle of the bed; and whilst he is

doing this, I grasp the thigh just above the knee, whilst an assistant holds the leg at the ankle with one hand, having the other underneath the calf, another assistant securing the thigh at its upper part; and when he is quite flat on his back, I pull out the whole extremity perfectly straight, and to its natural length, which is known by measuring it with the other; at the same time running my hand over the fracture, to discover if the bone is in the proper position: then, causing the limb to be retained in the extended posture by my assistants, we place sheets and short bandages, as at first; we then roll the sheets completely round the limb, over the calico slips; put a common deal splinter on the inner side, reaching from just below the juncture of the thigh to below the knee; a shorter one on the anterior part of the thigh, from the groin to the upper edge of the patella, which is not to be pressed on; and another of the same sort, though stronger, on the outside, so that it may reach for a long way above the great trochanter to below the knee-joint; these are secured by three tapes around the limb: over all, we pass several rollers, so as to keep every thing tight, and in its proper situation, taking especial care to secure firmly the head of the outer splint, by passing two rollers of five yards in length, beginning by twice around the loins, then crossing them over the upper part of the thigh at the groin, so as to include the splint; for, unless the upper head of the outer splint is well and immoveably secured, you never can have a straight thigh."

When tetanus supervenes upon fracture, or other injury of a limb, its amputation sometimes becomes a question. Mr. Hammick has done this twice, and seen it done in seven other instances; in all it proved fatal. His opinion is most decidedly against it.

As to amputating while mortification is going on, the author holds that there are no circumstances which justify it except violent bleeding from the sloughing of an important artery which we cannot arrest.

From the preceding details, and more especially from the extracts we have made, our readers will be able to judge for themselves of the nature, and in a great measure of the merits of this work. The method of treating the different subjects is elementary, but there

are many important observations interspersed throughout, and which have been drawn by an intelligent mind from a very extensive field of observation.

We must, however, point out to the author two important blemishes. The paragraphs are unreasonably long; the eye and the mind are alike wearied ere they come to any resting place. That this remark is not uncalled for, our readers will acknowledge when we state that one paragraph actually extends through nine pages! The other blemish is one of omission: there is no index, a want which always takes from the value of a book, by the difficulty it throws in the way of reference.

MEDICAL GAZETTE.

Saturday, January 9, 1830.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum est, dicendi periculum non recuso."—CICERO.

LAW *versus* PHYSIC.

THE cause to which we alluded last week, as having been just decided before the Commissioners of Lunacy, is one which will give rise to reflections deep and lasting among all classes, and calls in a particular manner for the attention of medical men. The suspicion of insanity in Mr. Davies rested upon events of no unusual and extraordinary kind, but arose out of a train of everyday familiar occurrences, in which the whole metropolitan community are or may be partakers; while the evidence of a considerable number of our profession has shewn, in a very striking manner, the relation in which we as a body stand to the public, and especially the collision into which we may be occasionally brought with cross-examining counsel.

Now that the battle is over, and a beneficent victory achieved, we are able

to criticise the weak points of those who first took up their position in the field, and to analyse the system of tactics employed to overthrow them. We confine ourselves to the medical evidence. We are particularly struck with two things:—first, that those who saw the subject of all this inquiry, did not sufficiently balance the probable continuance or subsidence of the paroxysms of excitement into which he was thrown; and next, we object to the routine of exact and definite rules by which it was attempted to measure out and gauge the most indefinite and Protean of maladies. That Mr. Davies was at one period, (say when he saw Mr. Lawrence and Dr. Latham,) suffering from functional disorder of the nervous system, with anxiety, restlessness, vigilance, and exaltation bordering upon delirium, we presume it to be quite useless to argue. Dr. Latham shewed the becoming reserve of a cautious physician when he certified only to "an apprehension of his possible insanity." He regarded chiefly the wildness and extravagance of his demeanor; but his very guarded opinion (at a time too when all agree that appearances were the worst,) shews of itself that no organic or radical mischief was apprehended: indeed we have little hesitation in concluding, that a fuller acquaintance with the predisposing and constitutional causes, as well as the history and progress of the case, would have led to a more favorable prognosis. And we say so of all who saw the patient, or rather the hero of these adventures, prior to and at the period of his being placed under restraint.

Of this measure we would speak with due deference to the daily experience of practical men, and shall therefore call it only ill-advised. But of the system of inquisition acted upon by those who persisted in maintaining, down to the last moment, that no alteration in the condition of the patient

had taken place, we cannot speak with the same charity. It was in its nature unphilosophical, and maintained with a degree of obstinate unfairness quite unworthy the professors of an art so conjectural as that of medicine. We use the first term, because it must have struck every one who attended to the evidence for the insanity of Mr. Davies while at the Retreat, that the most palpable *petitio principii* was committed by his scrutinizing visitors. There was not the smallest attempt made to appreciate the grounds of his supposed delusions; but these were all taken for such without examination. Acting then upon the foregone conclusion, that they had an insane man to deal with, these gentlemen proceeded to probe him with sundry prescribed inquiries, which have, from time immemorial, been current among the faculty as tests of madness; and so long as one of these hackneyed queries remained unsatisfied, there was an unwillingness to surrender the preconceived opinion of the recusant's total incapacity. Now, with every wish to give due credit to well-founded principles of diagnosis, we must consider some of these routine notions as the merest prejudices. The proposal, for instance, to set a man down as mad because he will not forget a quarrel with his family, or because he will not own that he has been once insane, must, by any one who knows what the world is, be at once felt to be the height of injustice and absurdity.

The practical disadvantage of this plan was shewn, likewise, by the manoeuvre which the learned counsel employed to defeat it. The physicians, who relied upon certain palpable symptoms as diagnostics of insanity, were kept screwed down to their definition, which they were obliged to give in detail at a fixed date. They were then catechised as to the disappearance of these various hallucinations in succession. This, in some

cases, was not denied until a solitary token remained as a ground for the imputation of unsoundness. In the case of one witness the *reductio ad absurdum* was complete; for by his testimony it appeared that all the original supports of his opinion were removed, without however affecting his conclusion. In this way the curious anomaly of a disease with only one symptom, and, still more strange, *without any one*, was held up to the admiration of the world! We are aware that this system of sifting and winnowing the elements of morbid conditions is totally at variance with our common professional notions; and we do not allow that Messrs. Adolphus and Broderick are to be set up as rulers and judges over the wide world of medical criticism; but we are sure that any person who reflects upon the impossibility of defining madness by establishing a few simple, and accurate, and invariable points, without reference to the causes and co-operating circumstances of its occurrence, will not lay himself open to the kind of discomfiture to which we have adverted. An excellent example of plain unshackled good sense, favorably contrasted with technical prejudices, was afforded in the testimony of Dr. Macmichael, on the opposite side of the question. Mr. Brougham, in the course of his eloquent and argumentative, but in some respects not very fair, address, spoke more of the description of persons who had given evidence than of the mode they had pursued in forming their opinion. His objections to the biassed views of the exclusive monopolizers of insanity were certainly well-laid; but in advocating the cause of general observation and practice, he went, as perhaps he is apt to do, a little too far. He not only attempted to shew that the exercise of partial and divided talents was not the best way to arrive at a just conclusion, but he would have it that, in deciding upon a question of alleged

insanity, there needed *no professional investigation at all!* We question whether this doctrine would be quite palatable to some of our neighbours: we have known among us people very ready to decry certain branches of medical practice, but this has been always coupled with an implicit reliance upon their own infallibility, and unusual aptitude to decide upon difficult points.

We feel ourselves now on the point of slipping into one of our old quarrels, and in order to avoid this, we turn with pleasure to an example of unanimity and brotherly love which is really, in these contentious days, quite edifying. Contrasted with the chaotic confusion and discord of the other elements of the professional world, the confederation and sympathetic movement of the regular guardians of the insane is now the theme of general admiration. There is in it a show of arcadian good will redolent of the golden age. If other doctors differ, not so the *mail-doctors*; they follow each other like sheep; indeed, we thought they looked, at the close of the proceedings, a little *sheepish!* As to the mere fact that the case of Mr. Davies has been considered through the medium of an habitual mode of thinking and observing, there is no great harm in that. We have continual examples of practitioners who see in every case some mode of inflammation, or debility, or gastro-enterite. But when other systems are brought into operation—when a man's property, liberty, and reputation, are in jeopardy—the affair becomes very serious. Many people are a little maddish to their doctor, but must not be made to appear incompetent to their lawyer. It would, indeed, be a most perilous state of things if every silly head-strong boy and girl—every whimsical, capricious, man and woman—every strange person of acute feeling and ready talent, without the ballast of good sense and firmness—

were liable to be placed in confinement;—if, to employ a metaphor, every noisy, harmless fly that buzzed about and annoyed drowsy people were in danger of getting entangled in the cobwebs of a commission of lunacy! And be it ever recollected that a very little matter leads to all the rest. The advice is obtained for a trifle; the medical part, though unpalatable, is neither tardy nor expensive; but once call in the law, and the matter immediately becomes difficult and perplexing in the extreme.

“*Facilis descensus Avernus,
Noctes atque dies patet atri janua Ditis,
Sed revocare gradum, superasque evadere ad auras,
Hoc opus, hic labor est!*”

HOSPITAL REPORTS.

HOSPITAL OF MONTPELLIER.

Case of Artificial Anus, in which the method of M. Dupuytren was successfully employed. (See Gazette, vol. ii. page 10.)

J. C. a fisherman in the neighbourhood of Montpellier, aged 46, had labored under a scrotal hernia of the left side for twenty years. It became strangulated in May 1821, when the operation was performed. Severe symptoms followed; and on the sixth day the patient was awake by the sensation of a rent, which he experienced about the middle and anterior part of the left iliac region. From this aperture feculent matter was evacuated, and an artificial anus became decidedly established. Compression was tried, but without avail, as the patient could not bear it. A part, however, of the alimentary matters still passed by the natural exit.

On the first of September, when he fell under the care of M. Lallemand, he was in the following condition: the skin in the inguinal region was red, excoriated to a great extent, very sensible to the touch, and formed numerous thick plaits, converging towards the point which formed the artificial anus. The aperture admitted the point of the finger with some difficulty. A sound was introduced, but it did not reach the bowel till after it had passed an inch and

a half. The part which led to the intestine was the inguinal canal doubled upon itself. As the whole of the feculent matters did not pass by the fistula, but nearly one-third by the rectum, it was obvious that the projection which separated the portion of the intestine coming from the stomach, from the lower part, did not extend to the perforation at the artificial anus. M. Lallemand introduced a sponge-tent into the fistula, for the purpose of dilating it. This process required to be done at repeated times, as it produced attacks of inflammation. Considerable difficulty was experienced in discovering the lower part of the bowel; both sounds used in the search were, at the first attempts, introduced into the upper part; and the mode by which M. Lallemand at length satisfied himself that he had succeeded was, by finding it impossible to make the sounds pass one round the other. After this he adjusted the branches of the pincers separately, (see Gazette, vol. ii. p. 5), and then united them as a forceps. They were separated to the extent of two inches and a half at their extremity. He tightened the vice, and stopped when the patient complained of rather acute pain. The tightening was progressively increased till the third day, when the branches were nearly in contact. The fifth day, in the morning, when he awoke, the patient found the instrument in the bed beside him. He soon after passed a copious stool by the natural passage. On examining the pincers, a dry membranous substance was found, measuring two inches in length, three lines in width, and being in thickness about the size of a card. The fistula was dressed with charpié.

After the 14th day the patient went regularly to stool, nothing being voided by the fistula, which became so contracted that in a fortnight it would not have admitted a crow-quill. The edges were touched with nitrate of silver, and kept in contact by means of an elastic bandage. At the end of four or five days they were united by means of false membrane, but the patient having fallen, the cicatrix was ruptured. In four days more it was once again healed, and the patient left the hospital December 14th.

During seven years that this man survived the operation, he enjoyed perfect health, except when he suffered from his own imprudence; but he experienced

no inconvenience from the hernia, of which nothing remained except a very small sinus, from which there was a little oozing of mucus. One day, after having made some very violent efforts, he was seized with pain in the groin; a swelling formed, and gave vent to some very offensive pus. This happened twice subsequently from similar causes. Last year he was brought to the hospital laboring under abdominal inflammation, of which he died.

Examination.—In the left iliac region was found an oblique fistulous opening, lined by mucous membrane, about large enough to admit a crow-quill. Internally a portion of the ileum was adherent to the left groin by two columns; the one four lines in length by two in breadth, containing the canal which conducted the fistula to the interior of the intestine; the other band was merely a common filamentous adhesion. There was extensive ulceration about the ileo-cæcal valve. Traces of the projection which had been divided by the pincers were still perceptible:—*Journal Hebdomadaire.*

BRIGHTON HOSPITAL.

SIR,

If the annexed be a case worthy of your attention, the insertion of it in your valuable journal will greatly oblige.

I am, Sir,

Your obedient servant,

G. GWYNNE.

Dec. 16, 1829.

Calculus removed from the Bladder of a Girl by means of Weiss's Dilator.

Anne Tree, æt. 8½ years, a poor emaciated little creature, was admitted into this hospital Dec. 3, with great difficulty in passing water, which is stated to have been a source of great irritation, more or less, for these last four years. On her admission into the hospital she was sounded by Mr. Blaker, who discovered a calculus at the neck of the bladder. The removal of it was proposed the following day. Weiss's improved female dilator being passed into the urethra, was allowed to remain there till it was sufficiently dilated to admit of a free exit to the calculus, without causing a laceration of the parts; the dilator was then withdrawn, and a small pair of spoon-pointed forceps was introduced, which, by a little care, succeeded in grasping the stone, which was easily withdrawn. A few drops of blood followed its extraction, but no other inconvenience. The

size of the calculus was about that of a small onion, and weighed 3iss.

Ordered forty drops of Antimonial Wine, and twenty drops of Laudanum, in saline mixture, in divided doses. Tepid bath. Fomentations to the abdomen. Low diet.

5th.—Bowels not moved; pulse 110; tongue slightly furred, with thirst. Has passed a restless night. The mixture and other medicines to be repeated.

6th.—Has passed a better night; bowels open; can pass her urine without pain, which throws down a mucous deposit; has but little fever; thirst not so great.

Cont. remedia.

7th.—Not quite so well; complains of slight pain over the abdomen, increased on pressure. Bowels have not been open to-day; pulse 120.

Habeat enema c. Ol. Ricini statim.

Hirudines viij. abdomini.

Haust. Anodyn, h. s.

8th.—Better in every respect; bowels moved three times by the injection; tongue moist, thirst gone, pulse 98.

Rep. remedia.

9th.—Going on well; complains of no pain; can pass her urine without inconvenience; sleeps well.

Cont. medicam.

13th.—In all respects going on perfectly well. Ordered some opening medicine.

16th.—Discharged cured.

MIDDLESEX HOSPITAL.

Primary Affection of the Pericardium, in Rheumatism.

The following case of pericarditis connected with rheumatic inflammation of the joints, seems worth recording, chiefly because it presented this unusual peculiarity—that in the first attack of the disease, the inflammation of the pericardium preceded that of the joints by a well-marked interval of time. Such primary affection of the pericardium in acute rheumatism has been doubted by some, and denied by others; and few, or no examples of it have been noticed by medical authors.

The correctness of the ensuing statement, in regard to the earlier symptoms, rests indeed in a great measure upon the authority of the patient himself. He was interrogated, however, closely and repeatedly, concerning the outset of his complaint; and his account of the order and progress of its symptoms was distinct, and at all times

consistent: it was corroborated also by the relations with whom he had been living.

George Hodges, aged 17, a paper-hanger, admitted 20th Oct. 1829, under the care of Dr. Watson, with the following symptoms:

Pain and swelling of the knees and ankles; pain in the head and eyes, and in the back and shoulders; considerable dyspnoea, strong palpitation of the heart, and great general distress. Acute pain is produced in the præcordial region by pressing the diaphragm upwards beneath the cartilages of the ribs. Face flushed and anxious; much thirst; pulse frequent and full.

Says that he was in perfect health till five or perhaps six weeks ago. He then began to feel poorly, without any definite complaint, except that he sometimes felt a sensation of sinking within him, and was more than usually costive. This state continued about a week, when he was suddenly attacked, on a Saturday, after some previous excess both in eating and drinking, with acute pain on the left side of the chest, and violent palpitation of the heart: for this he was immediately bled, and took physic. In the course of that night he first began to feel a degree of stiffness in his ham strings and about his knees, but the next day he was still able to walk about. On the Sunday night his knees and ankles became very painful and swelled, and the pain in the side and palpitation abated considerably. He had never had rheumatism before. By degrees the inflammation about the joints subsided, and he returned to his ordinary employment, with some degree of tenderness still remaining in his feet and ankles. Seven days ago he suffered a fresh attack of rheumatism in his knees; they are now swollen, the swelling being puffy and diffused, and not confined to the synovial cavities; and slight streaks of red extend a little way along the thighs. He had never been entirely free from palpitation since its commencement; it has increased much since his relapse. He had some difficulty of breathing last night, which was greatly aggravated this morning; his respiration has been somewhat relieved by the abstraction of 16 ounces of blood from the arm.

Hydrarg. Submuriatis gr. vj. Opii gr. ss. statim.

Haust. Sennæ Comp. post horas quatuor.

Postea sumat Hydrarg. Submuriat. gr. ij. 4tâ quâq. horâ.

21st.—Bowels freely purged; diffused swelling and pain of the wrists; palpitation great; lies on his back, with his head a little raised; in other respects much the same as yesterday.

22d.—Gums very tender. He has lost all pain from his head and eyes. Respiration calm and easy, and he has no pain in

the chest; action of the heart strong and frequent; pulse full, but soft; bowels open; joints much as before, but painful only when he attempts to move them.

Hydrarg. Submur. gr. ij. nocte maneque.

24th.—Improving, but the palpitation is still considerable. He is able to get up to the night chair, and to move about in bed, with no inconvenience, except the pain which such movements occasion the affected joints. Countenance free from anxiety; gums sore.

Perstet in usu Hydrarg. Submuriat. omni nocte tantum. Hirudines, viij. regioni cordis.

28th.—Gums still slightly tender. There is some pain and swelling of the left wrist; all the other joints much better. Action of the heart strong and regular. No "bruit de soufflet;" no anxiety.

November 4th.—Has been for some days free from pain or swelling of the joints. Action of the heart much less forcible. Tongue clean; countenance natural.

Made an out-patient by his own desire.

Dec. 3d.—Attended as an out-patient, having been in the country since his discharge from the hospital. Much improved in appearance; complains only of a sense of weakness, affecting the left side in particular, from the shoulder to the leg; the weight of a great-coat makes the left shoulder ache. Slight bodily exertion (and especially the act of ascending stairs, or a hill) makes him pant, and occasions violent beating of his heart.

There can be little doubt that, in this case, irremediable adhesion of the opposite surfaces of the pericardium to each other had taken place, before the patient came to the hospital.

CITY OF LONDON LYING-IN HOSPITAL.

Swelling of the Upper Extremities after Delivery.—Death.

SARAH MILNE, æt. 18, under the care of Dr. Lidderdale, was seized, at 6 P.M. December 26th, twenty-four hours after delivery, with shiverings; these were followed by aching pains over the whole body, particularly in the joints; great heat and dryness of the skin, and also occasional delirium. The pulse was extremely quick (140), tongue white and clammy, face pale, and countenance anxious; bowels costive.

Some aperient medicines were ordered, and, in case the delirium continued, twelve leeches were directed to be put to the temples.

Sunday, Dec. 27th, 8 A.M.—Has passed

a restless night, the delirium continuing at intervals. The leeches were applied, and bled well. The lochial discharge continues. The infant died in convulsions this morning, and there is at present no secretion of milk. The bowels have been opened three times. A swelling of the upper extremities has come on, in consequence of which the attendance of the surgeons is requested.

1 P.M.—Dr. Lidderdale, Mr. Coulson, and Mr. Rance, met in consultation. The upper extremities are swollen, from near the axilla to the wrist-joints, and over the left wrist there are two or three faint red spots. Pressure on any part of the limb gives great pain, particularly in the course of the vessels and on the joints. The swelling is very tense, but does not pit on pressure. The knee and ankle-joints are very painful, but the lower limbs are not swollen. The patient complains of great thirst; the skin is hot and dry; the action of the pulse rather strong, and very rapid; slight delirium, and a tremulous convulsive action of the muscles of the face.

V. S. ad 3xij. Saline mixture, with diaphoretics.

The patient felt somewhat easier after the bleeding, but died at 6 P.M.

The body was examined on the following day, by Mr. Coulson and Mr. Rance. There was no organic disease in any part, but there was considerable effusion into the subserous cellular tissue of the abdomen; also between the pia mater and arachnoid, and the pericardium contained about an ounce more of fluid than natural. The swelling of the upper extremities was occasioned by effusion of serum into the cellular tissue. The sinuses of the brain, as well as the veins of the abdomen, pelvis, and upper extremities, were carefully examined, but presented no traces whatever of disease.

The following fatal case of swelling of the extremities, after delivery, also occurred in this hospital a short time ago:—

Swelling of the Right Leg and Left Arm, after Parturition.—Death.

Sarah Reynolds, aged 20 years, of a delicate habit and fair complexion, under the care of Mr. Rance, was seized, on Thursday the 22d of October, fourteen days after delivery, with head-ache and numbness of the right ankle. On the following day (the 23d) she was greatly distressed with pain and swelling of the right leg and left arm; there was a blush of redness at the ankle and at the wrist; pulse small, quick, and fluttering (144 in a minute); skin hot and dry; tongue parched, and rather brown; alvine and urinary excretions natural; con-

tinued to suckle her infant; lochia not suppressed.

Rk Acid. Citric.
 Potas. Subcarb. aa 3j.
 Mist. Camphoratæ, ℥iij.
 Liq. Antim. Tart. ℥xl.
 Tr. Digitalis, ℥xl. Aq. Menth. vir.
 ℥iiss. Syr. Croci, 5iij. M. ft. Mist.
 Sumat. Coch. ij. ampl. quartâ quâque
 hora.

Rk Hy. Submuriat. gr. iv.
 Pulv. Antim. gr. j. ft. Pil. H. S. sumend.
 Rk Magnes. Sulph. ℥ss.
 Infus. Sennæ, 3iiss. Tr. Sennæ, 3j.
 M. ft. haust. mane sumend.

24th, 12 A.M.—Bowels moderately acted upon. Had some sleep in the night; pulse not so frequent; tongue more moist, and rather white; not so much heat of skin.

Pergat. in usu Misturæ et Pil. h. s. et haustûs mane sequent.

8 P.M.—Muscles of the face slightly convulsed; tongue protruded from the mouth; with a constant quick motion from side to side; carotid arteries acting powerfully; dilated pupils, with slight contraction on the approach of the candle; delirious; swelling of the extremities just the same.

Hirudines, xij. temporibus. Emp. Lyttæ nuchæ.

In about half an hour, delirium and convulsions ceased.

25th, 9 A.M.—Has had a restless night; respiratory organs affected; rattling of mucus in the bronchiæ; pulse small and feeble, too quick to be exactly numbered; vital powers sinking. Ordered wine to be frequently given.

Rk Confect. Aromatic. 3j.
 Spirit. Ammoniac Arom. 3j.
 Syrupi simp. 3iij.
 Mist. Camphoratæ, 3iij.
 Aquæ Cinnamomæ, 3iij. M. sumat.
 Coch. ij. quartâ quâque horâ.

Became more and more enfeebled, and died on the 26th, at two o'clock A.M.

Inspectio Cadaveris.—The body was examined, thirty hours after death, by Mr. Coulson and Mr. Rance. The spermatic veins of both sides were carefully traced, and found quite healthy; the veins of the pelvis, with the exception of the right external iliac, were also in a natural state: this vein was a little thicker, and more vascular than natural, and contained a considerable quantity of flocculent matter, which appeared to be coagulable lymph; it did not, however, adhere to the internal surface of the vein, was not soluble in water, and sunk to the bottom of the glass. The uterus was not diseased, nor indeed could any disease be ascertained in the abdomen. The femoral vein was quite healthy. There was a considerable effusion of sero-purulent matter

beneath the skin covering the right ankle-joint, and a small quantity beneath the integuments covering the wrist. Permission could not be obtained to examine the other parts of the body.

The patient was seen, during the progress of the complaint, by Dr. Gordon, who was officiating for Dr. Lidderdale (then out of town), and by Mr. Coulson.

GUY'S HOSPITAL.

Compound Dislocation of the Ulna, and Compound Fracture of the Radius, without any Blow on the Parts.

MICHAEL DOBSON, æt. 58, was admitted into this hospital on the 9th of December, for compound dislocation of the ulna and compound fracture of the radius, produced by his catching at a rail to save himself from falling, with 2 cwt. of oranges on his back. He had no blow whatever at the part.

Mr. Key proposed amputation, but the poor fellow would not consent, as it was his right hand. The protruding extremity of the ulna was therefore sawn off, lint applied to the wound, the arm laid on a splint, and cold lotion applied. In two hours, however, the pain being very great, he readily agreed to its removal. It was amputated the same night, by the circular operation, about the middle of the forearm; not with "a flap from the posterior muscles." He was put to bed, and ℥xxx. Træ. Acet. Morphicæ were given in mint-water.

Dec. 10th.—Has slept pretty well, but was disturbed this morning by bleeding. The dresser was obliged to remove the dressings, and take up the anterior interosseal artery. Pulse 80, steady; tongue moist. He appears to be remarkably free from irritation, which is attributed to the acetate of morphia*.

14th.—Is doing very well. Dressings removed; but little adhesion; a single strap applied for support, and poultice. A pint of porter per diem.

28th.—Continues doing well.

* The preparation in question is of the strength of the Træ Opil P. L.; and being deprived of its stimulating qualities, appears to have an advantage over opium, after operations and in many other cases.

BOOKS RECEIVED FOR REVIEW.

A Treatise on Neuralgic Diseases. By Thomas Pridgin Teale, &c. &c. 1829.

Popular Illustrations of Medicine. By Shirley Palmer, M.D. 1829.

A Treatise on Fever. By Southwood Smith, M.D. Physician to the London Fever Hospital. 1830.

A Treatise on Poisons. By Robert Christison, M.D. 1829.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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SATURDAY, JANUARY 16, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XVI,

Injuries.—Incised Wounds.

GENTLEMEN—Having concluded the observations that I had to offer respecting inflammation, I now come to another important division of surgery—the *nature and treatment of injuries*; which, indeed, may be regarded as the continuation of the former subject; for injuries produce inflammation—and our principal object, in their treatment, is to avert or to lessen inflammatory action.

I have first to speak to you of *wounds*; and the most simple form of that kind of injury consists in *incised wounds*, or cuts; under which head we include the great majority of *surgical operations*. As the observations that I have now to make respecting the nature of those injuries, and the mode of managing them, are equally applicable to cases of surgical operation, the treatment of the latter falls under the general principles which I shall now have to lay down to you.

Under the head, then, of *incised wounds*, we consider the division of any of the soft parts of the body by a cutting instrument. Common experience has shewn, that if a wound be inflicted in this way, it should have the sides brought together, and that they should be maintained in contact; thus the sides will unite, and the wound will be healed without any discharge taking place. If an ordinary person cut his finger, and just folded something round the part, and cured it in that way, were he to be told that he cured the wound *per primam intentionem*, he would, perhaps, be surprised that he had accomplished so scientific a process. That

is the name the learned have given to this mode of healing wounds. When the parts are brought together, when they adhere from being kept in contact, the union is said to be effected *per primam intentionem*—by the union by the first intention. This is a mode of uniting wounds which, as you may suppose, has been known from the remotest antiquity, although the nature of the process by which the union is effected has only been clearly explained in comparatively modern times. This mode of healing wounds is now very commonly called *union by adhesion*; union by the first intention, or union by adhesion, are therefore synonymous expressions, precisely equivalent. When a wound is managed in this way, it is found that the substance called coagulating lymph is thrown out on the surface of the wound; or rather it is effused in the interval between the approximate sides of the wound, and thus agglutinates or unites them to each other. Vessels are then formed in the lymph thus effused, and organizes it so that a firm union is established between the two sides. That is the nature of the process—the effusion of coagulating lymph, the formation of vessels in the lymph, and its organization; thus it accomplishes an union between the parts that have been separated.

Now you will understand that this union is not accomplished by the effusion of blood; and in this respect it is necessary for me to point out a mistake made by Mr. Hunter, who speaks of union by the first intention as if it took place in consequence of the effusion of blood, and the subsequent organization of that blood. It is true that, when blood is effused into a wound, it will temporarily agglutinate the sides of the wound; but the blood so effused never becomes organized; nor have we any evidence to prove that blood, under any circumstances, does become organized in the way Mr. Hunter represented. In fact, in reference to this particular subject of the union of wounds by adhesion, the presence of the blood is to be regarded rather in the light of an extra-

neous substance ; and it is our object, before we bring the edges of the wound together, to cleanse them effectually from all coagula. The presence of coagula would impede the union and render it imperfect. It happens occasionally that some blood is shed in the circumscribed cavities of the body—or that it is extravasated into the cellular substance ; but we do not find, under any of these circumstances, that the blood becomes organized. On the contrary, in most instances the blood acts obviously as an irritant, and excites inflammation with suppuration—that is, it produces effects which render it necessary to get rid of it as an extraneous substance. The coagulating lymph is effused from the capillaries of the wound, and is to be regarded as a secretion ; it is to be regarded in the same light as the effusion of coagulating lymph from the capillaries of a part under inflammation. This coagulating lymph is not effused from the vessels that are divided in the wound. So far as the mere effusion goes, the process does not seem to be essentially distinct from several others that I have already had occasion to describe. In fact we may say, in reference to the deposition of this particular substance, that the process is essentially the same under the five circumstances which I have already mentioned. *First*, in the effusion of coagulating lymph, for the purpose of uniting a wound by adhesion. *Secondly*, in the commencement of the process by which a breach is to be repaired, when union by the first intention has not taken place—when granulation and cicatrization are to repair the injury ; which is called union by the second intention. *Thirdly*, in the interstitial effusion into a part under inflammation, producing thickening and induration. *Fourthly*, in the consolidation of the parts which constitute the sac, cyst, or sides of an abscess. *Fifthly*, the effusion which occurs on the surface of the serous membranes under inflammation. In all these five cases, there seems to be an essential distinction in respect to the nature of the substance that is poured out by the vessels ; and in all of them it is described under the same term of coagulating lymph. The substance that is poured out under all these different circumstances agrees in this—that, after it has been effused, it admits of receiving vessels and becoming organized ; and in that point there is a strongly-marked distinction between the effusion of coagulated lymph and the effusion of blood ; in the latter of which we see no such circumstance as a subsequent penetrating of blood-vessels and organization.

The process in the various cases that I have now mentioned has been named by Mr. Hunter "*adhesive inflammation* ;" for he regarded the process as essentially the same under the various circumstances. An

objection has been taken to the employment of the term inflammation, in reference to the process by which a recent wound is united ; for, in fact, under favorable circumstances, we find the union by adhesion will take place without vascular disturbance in the part. You will not observe any swelling—you will not observe any heat or pain—and, in fact, you will not be able to observe the occurrence of any of those circumstances that are considered necessary to characterize inflammation. If these circumstances should occur—that is, if inflammation takes place in the part so as to be recognizable by the signs which we ordinarily observe as characterizing it—the union by adhesion is disturbed, or does not occur. The supervention, therefore, of inflammation, in an obvious and distinctly recognizable form, interferes with and prevents the accomplishment of adhesion. When you hear the term adhesive inflammation employed, you might suppose that there was something peculiar in the inflammation—that it was some particular kind of inflammation that was necessary to accomplish the effusion of coagulating lymph. We are not aware, however, that there is any thing particular in the nature of the increased action which ends in this effusion. The formation of coagulating lymph seems rather to arrest the inflammation, when it has arrived at a certain pitch or degree, than to be the result of any particular difference in its nature.

The union by adhesion is accomplished within a very short period of time. In some experiments made by Dr. J. Thompson, he found the layer of coagulated lymph was deposited on the side of a wound within four hours of the time of its infliction, and I have already had occasion to mention that lymph had been effused ; and vessels had been projected into it, within twenty-four hours of the time of the occurrence of the injury. In incised wounds we may say that organic union of the divided parts may take place in twenty-four hours ; but, at all events, if we allow forty-eight hours, we may safely assert that the parts can be so united within that time.

It appears that all the soft parts of the body are susceptible of this process of union by adhesion. Thus, in the case of a wound in the limb, which extends through the various textures, such as the skin, the cellular membrane, and the muscles—all these are united by the process of adhesion. The harder parts, however, do not seem susceptible of this process ;—bones, for example, do not unite by adhesion. I fancy the fibrous textures do not thus unite ; at all events, there is one instance in which we see clearly that a union does not take place. I allude to the sclerotic coat of the eye, where we make a punctured wound in the operation of cataract—you see the mark of the wound

remaining as long as the patient lives. No union by adhesion takes place in an incision made in the sclerotic. Whether tendons or nerves unite by adhesion, are points that have not hitherto been completely settled.

The effusion of coagulating lymph, in the first instance, agglutinates the sides of a wound, and this forms a kind of new bond of union between the textures that are divided. When this union once becomes organized, after a certain time has elapsed, we find that the substance thus deposited is converted into something of the nature of the textures which it unites; that it assumes more or less the nature of the muscles, if the muscles be divided; and the same remark will apply to the skin and the cellular membrane. It does not, however, in *all* respects assume the original character of those tissues. I have already had occasion to observe, that the uniting substance is something that will enable the part to perform its functions, although you are still able to distinguish, by external inspection, the adventitious matter thus deposited from the original component tissues of the part. But, in the cases of skin, muscle, and tendon, it is something that will restore to the part that was divided the power of exercising their original functions.

The union by adhesion will take place not only where a small division of the parts has occurred, but also where they have been extensively detached, and almost completely severed from the body. If a large piece of the scalp remain connected merely by a small portion of the skin, if it be laid down on the surface, and the parts be kept in contact, it will unite. If a finger be nearly chopped off, and hang by a bit of skin only, the part will unite if the surfaces be kept in contact. I remember the case of a person who was travelling on the outside of a coach; he laid his head down on entering a gateway, but not low enough, and the edge of the lintel nearly scraped off the ear—in fact it hung to the head by a portion of skin less in breadth than the fore-finger. It appeared to me at first that the best way was to snip the skin through with the scissors, but, as a kind of experiment, the ear was laid down, and kept in its position by a slight bandage, and it united very well.

This power of adhesion is still better illustrated by the phenomena it presents in the restoration of lost parts, and also by those experimental proceedings on animals, in which attempts have been made to imitate the process of engrafting adopted with regard to vegetables. It is a curious circumstance, that so long ago as the fifteenth century, a practice prevailed at Bologna, in Italy, of restoring artificially the loss of the nose. There were one or two families in that country in whom this art resided, and by whom it appeared to be handed down

hereditarily, and who were famous for its performance. The practice, however, extended to surgeons, and several experiments were made by a youthful professor of the name of Taliacotius, who wrote a Latin work upon the subject, called *Chirurgia Nova de Narium, &c. defectu per insitionem cutis ex humero adcriendo, &c.* which was printed in 1597, and in which he describes at full length the process he adopted for restoring lost noses, ears, and lips, and he has illustrated the subject with several plates. The cures that were performed by Taliacotius were seen by many of his contemporaries, who have attested the facts; and there is also this kind of evidence of the truth of it—his fellow-citizens at Bologna erected a statue in the anatomical theatre to his honor, in which he is represented holding a nose in his hand. Perhaps, however, he is better known in this country through the notice taken of his proceedings by the celebrated satirical poet, Butler, who says,—

“ So learned Taliacotius, from
The brawny part of porters' bum,
Cut supplemental noses, which
Would last as long as parent breech;
But when the date of nock was out,
Off dropp'd the sympathetic snout.”

[Loud laughter.]

The truth is, Taliacotius did not cut noses from the breech, nor out of any part of another individual, so that the noses did not sympathize with the dead as Butler represented. The plan Taliacotius followed was this:—He pared the cicatrix of the lost nose, so as to give it the character of a recent wound, he then raised a portion of the integuments of a size and shape calculated to restore the nose, from the fore-arm or arm. He then fixed the arm, but without detaching the piece, to the edges of the lost nose, and confined it by sutures. The person's arm was kept in that position as long as it was necessary for maintaining the circulation in the supplemental nose—till the adhesion between that and the natural skin of the face was accomplished. The skin was then removed from the arm, and remained engrafted to the face. In this way he restored noses, and, according to his own account, he also restored lips and ears. Although ridicule has been cast on Taliacotius, yet there seems no reason for denying the fact that such things were indeed done. We can have no reasonable ground for denying that a part of the integument might be thus raised from the hand and fore-arm, and that it might be applied in the way described to the cicatrix of the lost nose, and become adherent there, and would in some measure fill up the unsightly chasm which the loss of this member produces in the countenance. We cannot so easily believe all the rest that Taliacotius has stated; for he says that these new noses smelt more

accurately than the old ones, and grew large and strong, nay, that they sometimes became so elongated as to require them to be removed.

Another mode of restoring the nose has been imported to this country from India, where it is not an uncommon practice to mutilate robbers and captives by cutting off their noses and ears. A portion of the integument is raised from the forehead sufficient to fill up the breach, the incision being made in the shape of a triangle; the part that is to cover the nose is detached, and this portion corresponds to the bore of the triangle: the edge of the nose is made a recent wound; then the flap is turned round, that is, the part by which it remains attached to the forehead is twisted. It is then confined by sutures in the situation of the old nose. This is the mode recently resorted to in this country, and which has been practised by Mr. Carpue. Some two or three noses have been made in this way in this hospital—enough to show that the process is a very feasible one.

These facts show you the extent of the power of union between the edges of a recent wound in the body;—they show that it is not only sufficient to agglutinate, or unite together the sides of a cut in any part, but also to form a union between two recent surfaces, even where one is extraneous to the part in which the wound has taken place.

In the Memoirs of the French Royal Academy of Science, for the year 1786, there is a paper, by Duhamel, on engrafting the spurs of cocks on their combs. He mentions, that by way of an experiment, the detached spur of a cock was taken; an opening was made in the comb, and it was fixed there. He says, the spur grew in the comb. Inosculation took place, and the spur grew to a great size: he mentions, four inches.

Mr. Hunter repeated this experiment, and he found the fact took place, as stated by Duhamel. He found the spurs of the cock, when inserted in the comb, grew to a larger size than if they had been left in their natural situation. He found that the spur of a hen might be transferred to a cock, and the spur of a cock to a hen; but, in the latter case, it did not grow so firmly, nor so rapidly. He mentions another experiment, that of inserting a tooth recently drawn, into the comb of a cock, and under such circumstances it will become adherent. He mentions this as an instance of vascular union, though it may be doubted whether the adhesion of the tooth to the comb of the cock could be considered as arising from the inosculation of the vessels. I remember seeing an instance in which a tooth was firmly fixed in the comb of a cock, where the tooth at the time it was inserted, was dead, that is, it had lain a long time, so that it seems the living parts have the power of

contracting and healing round it in that situation without a vascular union taking place. Mr. Hunter performed a further experiment; viz. taking out the testicle from a cock, and making an opening in the abdomen of a hen, and under these circumstances he found that the testicle became adherent to the abdomen, and grew in that situation.

With respect to the treatment of incised wounds, including also those inflicted by surgical operations, you will immediately perceive that it must be simple, the object being to promote adhesion, and to prevent the occurrence of inflammation. In order to promote adhesion, we must bring the edges of the wound together, and we must maintain them in contact. This is accomplished either by strips of adhesive plaister, or by sutures, or by bandages, or by attention to the position of the limb.

Heretofore, sutures were generally relied on for accomplishing the union of recent wounds; but now, we almost exclusively employ adhesive plaisters for the purpose. If adhesive plaisters be used, you must bring together the edges of the wound by employing a certain number of slips of plaister, just sufficient for the purpose. You do not want to employ more than will simply approximate and maintain in contact the edges of the wound, and you must do this gently. It is not necessary to cover over the whole surface of the wound, nor is it by any means advisable. Supposing a wound has taken place, with considerable loss of substance, if you forcibly draw the parts together you will find they will not remain in that position, and you only run the risk of exciting inflammation by the effort to make them do so. You will recollect that the substances of which adhesive plaisters consist, are more or less of an irritating kind, and from the injured state of the skin, they may excite more or less of uneasiness. Hence you employ only as many slips of plaister as are just sufficient to accomplish your purpose. You will recollect that more or less of inflammation and swelling is likely to take place after the infliction of a wound, consequently, if we apply adhesive plaisters tightly when the part is swelled, they will act as ligatures, and they thus produce a degree of pressure on the wound that aggravates the inflammation. I have sometimes seen serious suffering produced by forcibly dragging together the edges of the wound, when a considerable loss of substance had taken place, and the plaisters had been applied so as to exert a forcible pressure on the wound after the inflammation had commenced. Not long ago I had occasion to see a case, where an operation had taken place on the female breast. Large broad plaisters were applied, and the part was drawn together as tightly as it could be. After forty-eight hours, she sent for me in a

great hurry; she had sent for the medical gentleman who performed the operation, but in consequence of his absence, I went and saw her. She was in a state of severe suffering, and had passed the night in great agony; she had a sense as though there was a heavy weight upon the part. On opening the wound, I could see what produced this. Wherever the plaisters had not actually come in contact, the swelled red skin in the interstices rose above them, in consequence of the degree of pressure the plaisters produced. The skin all round the wound was red, beginning to be inflamed, and when the plaisters were removed, the lady felt as though a 100 lbs. weight were taken from the chest. By the means then adopted, the inflammation did not go any further. But if this dressing had been left on for 24 hours longer, it would have been sufficient to produce a serious attack of erysipelas. People say, how strange it is that the patient should have erysipelas! — but you generally find there is good reason for these appearances.

Then having applied the plaister in the way mentioned, so as simply and gently to approximate the edges of the wound, you may leave it open to the external air, or you may keep the parts covered with cloths dipped in cold water, so as to prevent the occurrence of inflammation. If the union goes on favorably, you take the plaisters off in three, four, or more days, and when you do so, you probably find the wound united, and hardly any more dressing is wanted. If you find the wound at any part is not united, then you renew the same applications; or, if you find the edges of the wound red, and not united, under these circumstances you apply spermaceti ointment, soap plaister, or bread and water poultice, and then the wound must be united by granulation.

Sutures are employed either alone or in conjunction with adhesive plaisters, and the form of suture that we use is what is called technically an *interrupted suture*, that is, in which the stitches are detached and separate. You just make a single stitch, and tie the silk or thread into a single knot. Sutures are convenient in a situation where the integuments are loose, as about the scrotum or neck, or where the moisture might detach the plaisters, as about the mouth. When you employ them, you should use small and sharp needles, and small silk or small thread ligatures, such as are proper for tying arteries with. The object of using the sutures is merely to keep the edges of the wound together, till the natural process of adhesion is accomplished. I have mentioned that a wound is partly healed by coagulating lymph in four hours, and that organic union takes place in twenty-four hours, therefore you can cut out the sutures in twenty-four hours. They will then have accomplished the purposes you wanted them for; and, if you let them stay

in longer, they become irritant substances to the wound, and thus produce mischief themselves. You put as many sutures as are sufficient to keep the edges of the wound together, and you may supply the interruptions here and there with adhesive plaister. You then leave the wound open, or cover it with damp cloths, in the way I have mentioned as proper when you use adhesive slips. It happened to me not long ago, to remove an enlarged lachrymal gland, which projected the upper eye-lid and rendered it necessary to make an incision from the root of the nose to the temporal process, and to meet this by another incision at right angles, in a T-shape, and of course a larger opening was made in the orbit. This wound I united by sutures, putting in just so many as were necessary to bring the edges together; and I used no other dressing but cold water. I cut off the sutures in twenty-four hours, no discharge took place, the whole united by adhesion, and the gentleman on whom the operation was performed was enabled to go about his ordinary avocations at the end of a week.

Perhaps, heretofore, sutures were employed more frequently than was necessary; but in modern times they have been too much neglected, and the use of them has been unjustly disregarded. The objection to sutures arose from the mode in which they were employed, rather than from the principle itself. Large needles and thick ligatures were used; and an idea existed that it was necessary to pass these deeply, so that the whole depth of the wound should be acted upon by the sutures; and besides this the sutures were left in for a length of time. You cannot wonder that, under such circumstances, they often excited considerable inflammation, and, in fact, that obvious mischief arose from their employment in that way; but if you use small needles and small ligatures, and if you cut off the sutures within twenty-four hours, you avoid all this mischief.

I should say, under such circumstances, that sutures are very often necessary, that they are generally advantageous, and, in fact, that they are not injudicious under any circumstances, when employed with these restrictions. You must use sutures for a recent wound of the eyebrows, of the lips, or of the face generally; because there it is important to have the wounds equally adjusted, in order to prevent or to lessen the deformity they might occasion. I have seen considerable deformity arise from the neglect of those means that were necessary to bring the edges of such wounds together very equally. I recollect an instance of a gentleman who had a penetrating wound of the upper eyelid. It had gone through the tarsus without injuring the globe. In consequence of not being united

by sutures the edges healed separately ; and in this case the fissure was not united, but a slit like a hare-lip remained. In cases of wounds of the groin, or scrotum, you will find sutures by far the most convenient mode of bringing the edges together.

I have mentioned the use of *interrupted* sutures as being the form which we generally have recourse to ; but there are cases in which the *uninterrupted* suture may be advisable. I remember an instance where I found it necessary to have recourse to a suture of this kind, and where it answered the purpose extremely well. I had occasion to go a few miles out of town, to see a patient. While I was dining, the medical practitioner who first sent for me requested I would come to see a dreadful accident that had just taken place. A boy had been bitten by a pig, who applied his tusks to the abdomen, and made a gash about the length of my finger ; and from this was protruding a considerable portion of the bowels. He had taken a good dinner, and his stomach was full. With some trouble I succeeded in putting the parts back into the abdomen ; but it was obvious that, if there were any degree of tension, they would come out again, and that it would be to no purpose to attempt to unite this wound by adhesive plaisters. I therefore considered that the only effectual means of accomplishing the object would be to sew the wound together, from one end to the other, embracing muscles as well as integuments, with an uninterrupted suture ; just as you sew up the opening in examining the body after death. This confined the obtruded parts, and other means suitable were employed to prevent inflammation. The case did well, and the boy recovered.

I mentioned two other modes of approximating the sides of a wound—*bandage* and *position*. We seldom trust the bandage alone for uniting wounds, though there are circumstances under which a bandage might be employed without any other means. With respect to *position*, the propriety of it is so obvious that it is not necessary to dwell upon it. If you had a cut across the thigh, and the patient were to bend the knee, the wound would soon open so that you could not bring it together ; whereas, if position were carefully attended to, the wound would heal without any surgical means. It is the same in wounds about the throat ; you often find that the mere position will, in fact, accomplish all you want. The position, therefore, is a point which must always be attended to. Whatever means you adopt, you find it necessary to keep the wounded part at rest ; and, in fact, it is well to enjoin rest of the body generally, in serious wounds of any important part. You place the patient on low diet, and keep the bowels clear by aperient medicines, which are means calculated to prevent the occurrence of inflammation. You will

see the most extensive wounds unite very speedily, and very probably after surgical operations, in which a large quantity of blood has been lost ; so that generally you need not be alarmed by patients bleeding freely in the course of an operation. The case does so much better afterwards, that it is in general advisable to let the blood flow freely in the course of an operation. It has often been observed on the field of battle, that after an important engagement, and where there are numbers of wounded, two or three days have elapsed before they have been all discovered ; and there have been instances of persons, with serious wounds, who have lain for four days ; they have bled freely, and yet when the wounds have been dressed, they have done remarkably well—no doubt much better than if the patients had been taken care of, and had been well stuffed. If there is hæmorrhage from a wound, you must see that all the bleeding ceases, before you attempt to unite the parts ; and you must, with a soft sponge, cleanse the wound from coagulated blood, before you bring the edges together. Large vessels, or often smaller ones that bleed freely, must be secured. Sponging the wound with cold water, and free exposure of the surface to the air, will stop the bleeding from a great part of the vessels which afford blood ; and when the flow of blood is stopped, you must bring the edges of the wound together. After the patient has gone to bed, the circulation recovers from the influence of the faintness produced by the loss of blood. The exposure of the wound to the air may have stopped the bleeding ; but when the part is closed, when the patient becomes warm again, more particularly if there is a good deal of covering upon the wound, and if the patient is covered with the bed-clothes, bleeding not uncommonly occurs. Secondary bleeding takes place ; and this may come on at some distance of time after the patient has been put to bed. The bleeding, perhaps, will partly escape or be partly retained in the wound, and give the patient great pain. There is so much suffering produced from this secondary bleeding, and so much alarm to the patient and the friends, that it should prompt you to take all possible means against those occurrences, which are also annoying to the surgeon, and occasion him to be sent for when, at times, it is very inconvenient to attend. Hæmorrhage will be most effectually prevented by preparing the patient before you perform an operation. You should not think of taking a patient in full vigorous health, who has been following the ordinary habits of eating and drinking up to the time of the operation : if you do, you will be sure to have something go wrong. In cases where an important operation is to be performed, you should enjoin abstinence from animal food and fermented liquors, for some

time before. You should take care to empty the alimentary canal by purging; and if the patient be robust, full habited, and young, it may be necessary to reduce him by venesection, before the performance of an important operation.

Then, in performing the operation, I have already hinted that it is best to let the blood flow freely from the vessels divided by the incision. Sometimes we see a person anxious to stop every vessel that may bleed; they think the vessels must be tied before they go on with the operation; but it seems to me that those cases do best where you let the blood flow freely. I generally follow this course. In fact, syncope is the natural remedy; and if the patient faint, the bleeding stops. You take up all the vessels that may bleed after the operation has been finished; you dress the wound lightly; you let the part be kept cool, and open to the air; you apply damp cloths to reduce the temperature; you put the patient into a cool, airy apartment; you let him have light bed-clothing, and give him nothing but light diet. Such means are the best calculated to prevent the occurrence of secondary bleeding. If you find the bleeding not so completely stopped as you wish, you may remove the patient to bed without actually closing the wound. Let it remain open to the air—it is the most effectual way of stopping the blood. You find the wound heal better if you let it remain open so as to get pretty dry: perhaps no cases are more favorable than when the surface has a slight glaze upon it; it prevents the occurrence of secondary hemorrhage when the patient is removed to bed, and instead of interfering with the process of healing, it is probable that you unite the wound more favorably. In fact, if you unite a wound when the patient is on the operating table, the carrying him to bed, and the new position in which he is placed, alter the bearing of the plaisters, so that the union is by no means so accurate. In such cases, whether of wounds or surgical operations, very light and simple diet is expedient until the cure is effected. It is by no means proper, under such circumstances, that fermented liquors should be allowed; and generally, you find it better that the patient should not take any animal food till the wound is united.

OBSERVATIONS

ON

THE FUNCTIONS OF THE NERVOUS SYSTEM.

By A. P. W. PHILIP, M.D. F.R.S. L. & E.

For the last fifteen years I have been engaged in an experimental inquiry re-

lating to the laws of the vital functions; and have from time to time laid the results before the Royal Society in six papers, which the Society has done me the honor to publish. All the experiments on which the statements are founded having been made in the presence of competent witnesses, the rule, from which I never deviated, has been to repeat each experiment till no doubt respecting the result remained in the mind of any one present; and it is satisfactory to me to be enabled to state, that, although many of these experiments have been repeated by the physiologists both of this country and the continent, they have in no instance been found inaccurate.

The nerves may be divided into two classes, those which proceed directly from the brain and spinal marrow to the parts to which they convey the influence of these organs; and those which enter such ganglions as receive nerves proceeding from different parts of the brain and spinal marrow, whether these nerves have or have not protuberances belonging to themselves which have also been termed ganglions, but which receive only the different fibres that belong to the particular nerve to which they are attached, and, from the circumstances in which they are placed, must have a different or at least a more confined relation to other parts of the nervous system. To the former, therefore, I shall, for the sake of distinction, and to avoid circumlocution, confine the term ganglion.

In the following extract from lectures delivered by Mr. Brodie before the College of Surgeons, and which have not yet been published, this accurate anatomist and physiologist has given the sum of our knowledge respecting the structure of the ganglions. "Those bodies which are found in certain nerves which appear to be formed by an enlargement of the nervous substance, and which are denominated ganglia, are of a complicated structure. Into ganglia the nervous fibres may be traced, and from these ganglia the nervous fibres again emerge. Scarpa has paid much attention to the fabric of the ganglia, and he gives the following history of it. He says that the fasciculi of nervous filaments which enter a ganglion are separated and divided from each other, and that they are combined anew. A nervous fasciculus entering a ganglion, divides into smaller fasciculi.

These divide again, and cross and intersect each other at various angles. Then the divided fasciculi become again united, and as at first they divided into smaller and smaller fibres, so when they begin to unite they form gradually larger and larger bundles. At last the nerve which entered a ganglion emerges from it with its fibres collected into one or more fasciculi. Sometimes several nerves enter a ganglion, in which case they are all blended together, forming a complicated net-work, in which it is impossible to determine what belongs to one nerve and what belongs to another nerve. Every fasciculus or filament which enters a ganglion passes through it. There is no appearance of any one terminating in it.

"If we unravel the texture of a ganglion, we find that each nervous fibre retains its own peculiar neurilema; but besides this, the spaces left between the intersection of the fibres are filled up with a peculiar soft substance of a greyish or yellowish color. With the nature of this substance we are unacquainted. Some have considered it as corresponding to the cineritious substance of the brain and spinal marrow; but Scarpa is disposed to regard it as a soft cellular substance, filled with a greyish and mucilaginous matter in emaciated subjects, and with a yellowish oily matter in those that are fat."

Such, then, is the structure of the ganglions, as far as it is known; and as, for the reason just mentioned, I shall confine the term to those ganglions which receive nerves proceeding from different parts of the nervous system; the term ganglionic nerve I shall confine to those nerves, which either enter or proceed from such ganglions, without adverting to their having or not having protuberances resembling ganglions belonging to themselves; although it is probable that a more perfect knowledge of the nervous system will point out this circumstance as a proper basis for a subdivision. It is necessary to keep this explanation in view, because neither the term ganglion nor ganglionic nerve has been employed with much precision.

Physiology has been greatly indebted to Mr. Bell for his important discovery of the different properties of the two sets of nerves which unite in forming each of the spinal nerves. It appears from his experiments, which have been

confirmed by those of Majendie, that the one set are nerves of sensation, the other of motion; a circumstance which explains many of the phenomena of disease, which have suggested the probability of these functions being exercised by different nerves bound up in the same envelope. Dr. Parry, in his treatise on the pulse, for example, relates a case where feeling alone was lost in one arm, and voluntary power alone in the other. But these are not the only, nor indeed the most important, functions of the spinal nerves. All of them contribute to the formation of the ganglionic system, on which the life of the animal, as will appear from many facts I am about to state, immediately depends.

One of the most striking differences between the ganglionic nerves and those proceeding directly from the brain and spinal marrow, is, that even independently of the ganglions and plexuses, the former every where more freely anastomose, if I may borrow a term from the sanguiferous system; while the latter proceed in a more direct course, being less connected with each other in their progress to the parts on which they bestow sensation and voluntary power; still further demonstrating the care with which nature blends the power of the ganglionic nerves. What purpose is served by this perpetual intertwining of these nerves? It is impossible for a moment to conceive that it is without an object. This question is most likely to be answered by inquiring into the nature and functions of the parts supplied by this class of nerves; those parts are the vital organs, the thoracic and abdominal viscera, and the vessels even, as we shall find by experiment where the parts are too minute to be made the subject of dissection, to their smallest ramifications.

It would appear from this arrangement, that, although to other parts the influence of only one part of the brain or spinal marrow is sent, the vital organs receive that of every part of them; and this inference has been confirmed by numerous experiments, too simple to admit of our being deceived, which I made many years ago. From them it appears, that although the muscles of voluntary motion obey a stimulus applied to no part of the brain and spinal marrow but that from which their nerves take their origin, the heart is influ-

enced by stimuli applied to every part of these organs, from the very uppermost surface of the brain and cerebellum to the lowest portion of the spinal marrow. The same was found to be the case with the blood-vessels to their minutest ramifications. Even the extremities of the arteries and veins, where they unite to complete the circulation, it was found by the aid of the microscope, could be influenced, nay, even deprived of power, by agents whose operation was confined either to the brain or spinal marrow.

In some animals even of warm blood, as appears from experiments related in my treatise on the Vital Functions, the motion of the blood in the capillaries may be observed for an hour or even two hours after death, provided neither great and sudden injury to the nervous system, nor great loss of blood, be occasioned by the mode of death; that is, long after the heart has ceased to beat. The continued action of the capillaries appears, from what is said in that treatise, to be the cause of the large arteries being found empty some hours after death.

It has also been shewn by experiments detailed in the same treatise, an account of some of which has appeared in the Philosophical Transactions, that the stomach and lungs are in like manner under the influence of both the brain and spinal marrow.

The partial connexion with the nervous system of the organs supplied by the cerebral and spinal nerves, and the universal connexion with that system of those supplied by the ganglionic nerves, explain many of the phenomena, both of health and disease. Why are affections of the stomach and other vital organs felt instantly through every part of the frame, while the effects of those of a muscle of voluntary motion, or even an organ of sense, although often a part of greater sensibility, is confined to the injured part? If the eye or ear, or the muscle of a limb, be so deranged by a sudden blow, for example, as instantly to destroy its power, sight, hearing, or the voluntary power of the part is lost, and there the evil ends unless inflammation ensues; but a blow on the stomach, which instantly destroys its power, at the same moment destroys that of every other part. It is not difficult to answer the question, since the state of the stomach,

from the cause just pointed out, may influence every part of the nervous system.

Here the question naturally arises. For what purpose are the vital organs thus connected with every part of the brain and spinal marrow?

This question is answered by experiments detailed in my treatise on the Vital Functions, an account of some of which appeared in the Philosophical Transactions of 1822. From them it was found that the power of secreting surfaces is deranged by abstracting from them any considerable part of the influence either of the brain or spinal marrow; and as the function of secretion is effected by the action of the nerves on the blood, it is evident that the presence of nervous power in a secreting organ would be useless, were not the blood on which it operates also supplied, and disordered if it were not supplied in due proportion; and consequently its supply varied as the supply of nervous power varies. We thus see, not only why secreting surfaces are placed under the influence of every part of the nervous system, but also why it is necessary that the sanguiferous system should be under the control of the same laws which regulate the supply of nervous power.

The influence of the whole brain and spinal marrow is united by nerves from various parts of these organs entering ganglions and plexuses, from which are sent to every part of the body nerves proved by direct experiment to convey the influence of every part of them; and this combined influence of the brain and spinal marrow is employed in forming the various secreted fluids, and supporting the other processes on which the due structure of every part depends; and I have, in a treatise entitled "On Indigestion," pointed out how extensively the phenomena and treatment of all diseases are influenced by this cause.

Such, then, is the relation which subsists between the nervous system and the other vital organs I have had occasion to mention; but there is another relation of that system which must be considered before the nature of its functions can be clearly understood.

The nervous system, in the usual acceptance of the term, is very ill defined, and functions of the most dissimilar nature are classed together under

the general denomination of nervous. Those of sensation and volition, for example, are classed with the excitement of a muscle and the formation of a secreted fluid. It seems highly improbable that results so different should arise from the same or similar causes. On the most cursory view of the subject, we cannot help supposing that the nervous system, according to the common acceptation of the term, includes more than one principle of action. We have every reason to believe, that the sensorial is a power wholly distinct from that strictly called nervous; and all doubt seems to be removed by the circumstance, that although the organs of both belong to the nervous system, it is evident they are not the same organs, because the sensorial power resides chiefly in the brain, while the nervous power, properly so called, resides equally in the brain and spinal marrow; the latter of which organs is capable of its functions independently of the former, as appears from many of the experiments of Le Gallois, which have been confirmed by several of my own.

It occurred to me on reviewing the whole of these circumstances, that as we can destroy the nervous, without at all impairing the muscular power, it might be possible to remove the sensorial power without immediately destroying that more strictly called nervous.

I made many experiments, which are detailed in my treatise on the Vital Functions, for the purpose of determining this point; from which it appears that in all modes of death, except the most sudden, (arising from a violent and sudden impression made on the nervous system, by which the whole of the functions are instantaneously destroyed), the sensorial functions are the first which cease, all the other powers of the system remaining more or less perfect, and any imperfection which appears in them not directly depending on the loss of the sensorial power.

Of the sensorial functions, sensation and volition are the only ones which we are called upon to consider here, because they alone have any share in maintaining animal life.

The following may be regarded as the nervous functions properly so called. The excitement of the muscles of voluntary motion, by which through the intervention of the nervous system they in their usual functions are subjected to

the sensorial power; the occasional excitement of the muscles of involuntary motion, by which under certain circumstances the sensorial power is also capable of impressing them through the nerves, particularly when under the influence of the passions; the act of causing an evolution of caloric from the blood, by which the due temperature of the animal body is maintained; the act of forming from the blood the various secreted fluids, and of maintaining the other assimilating processes by which the healthy structure of every part of the body is preserved.

The first of these functions is universally acknowledged to be a function of the nervous power, properly so called; but there has been much difference of opinion respecting the way in which it operates. The older physiologists believed that the muscles derive their power from the nervous system. Haller was the first who taught that the muscular power belongs to the muscle itself, to which the nervous power bears no relation but that of a stimulus, and endeavoured to support those opinions by experiment. His opponents, however, objected to his inferences, because, although the division of the nerves may prevent the muscle from receiving more nervous power, it does not deprive it of that already bestowed upon it, either existing in the muscular fibres themselves, or dispersed through them in nerves too small to be removed; and this objection appeared to be strengthened by the muscles of involuntary motion, whose function is supported by stimuli peculiar to themselves, being still supplied with nerves, of the use of which Haller gave no satisfactory account. It appeared to me that the question could only be determined by some experiment capable of directly ascertaining whether the excitability of muscles is maintained by the influence they receive from the nerves, or impaired as by other stimuli. On trial, the latter was found to be the case. Muscles whose nerves had been divided, sustained the action of the same stimulus longer than those whose nerves were entire, and which consequently were exposed to the action both of the nervous power applied by the will of the animal and the artificial stimulus*. The power of the muscle, therefore, is independent

* My Treatise on the Vital Functions, third edition, Exper. 34. 35.

of the nervous power, and is affected by it in the same way as by other stimuli.

The experiments by which all the other functions just mentioned, with the exception of the maintenance of animal temperature, have been ascertained to be functions of the nervous power, I have laid before the Royal Society. From these experiments it appeared that the functions in question were always destroyed by depriving their organs of the influence of the nervous system. That the maintenance of animal temperature is a function of the nervous system, properly so called, appears from a variety of facts generally known, the temperature either of a part or of the whole body being lessened by any cause that impairs the action of particular nerves in the former instance, or of the whole nervous system in the latter. The question then is, is the nervous system capable of all these functions after the sensorial power is withdrawn?

At the moment of what we call death, the sensorial functions cease, the animal no longer feels or wills. Whether the nervous functions properly so called still continue, can only be determined by experiment*. That the nervous system is capable of causing the evolution of caloric, which supports animal temperature after the sensorial power is withdrawn, appears from many experiments related in my treatise on the Vital Functions; and that the nervous power under the same circumstances is still capable of forming the secreted fluids, and supporting the other processes by which the structure of every part is maintained, is shown by very frequently repeated experiments on the newly dead animal related in the same treatise. From these experiments it appears that some secretion of gastric juice takes place after what we call death, and that some derangement of structure in the lungs may be produced by dividing the eighth pair of nerves immediately after death; a proof that the processes on which the structure of the part depends, continue for some time after the sensorial power can no longer influence them.

It was this independence of the functions properly called nervous on those of the sensorial power, and the analogy which subsists between the former and

chemical processes, which suggested that the agent, on which the nervous functions immediately depend, instead of being peculiar to the living animal, may only be an agent employed by those powers which are so, in the same way as any other constituent part which the living animal possesses in common with inanimate nature; and it appeared to me that the accuracy of this suggestion would be placed beyond a doubt if the nervous power could be proved to be capable of its function, after it had been made to pass through any other conductor than the nerves; for it will be admitted that the powers peculiar to the living animal can only operate, and, as far as we see, can only exist, in the organs to which they belong. The brain cannot perform the office of a muscle, nor a muscle that of the brain.

If then the nervous power can be made to pass through any substance but that of the nervous system in which it resides, it evidently has an existence independent of the mechanism of that system, and therefore is not peculiar to it. This, after many vain attempts, I succeeded in effecting. It appears from experiments which have been repeated with the same result by M. Brechet and other physiologists at Paris, that the nervous power is capable of its function after it has been made to pass through other conductors than the nerves.

It would seem, therefore, that however generally the nervous power has been confounded with those powers more strictly called vital, it is only an agent employed by them. This view of the subject seemed to point out the possibility of finding some of those powers which operate in inanimate nature capable of the functions of the nervous power properly so called, if brought to operate under the same circumstances; and on trial it was found, as appears from experiments published in the Philosophical Transactions (t. 1822 and 1828, and repeated with the same result by Dr. Abel, M. Brechet, and others, that galvanism may be substituted for the nervous power, not only in the more simple, but in the more complicated functions of that power. It not only appears that galvanism is capable of exciting the muscles and causing an evolution of caloric from arterial blood, but of forming the secreted fluids from the blood, and supporting all those functions on which the struc-

* See Philosophical Transactions, 1815.

ture of the body depends. How far do the whole of these facts, whether relating to the nature or functions of the nervous power, go in proving its identity with galvanism?

On reviewing what has been said of the relations of the sensorial, nervous, and muscular powers, the question naturally arises; if both the nervous and muscular powers are thus independent of the sensorial power, and capable of their functions after it is withdrawn, why do the more perfect animals for so short a time survive the loss of the sensorial functions? The cause is, that on the removal of the sensorial power, respiration ceases; because this function partakes of all the three powers, the sensorial, nervous, and muscular.

It has been customary to speak of the muscles of respiration as at least in part muscles of involuntary motion. What is meant by a muscle of voluntary motion? It is a muscle whose action under all ordinary circumstances we can excite, interrupt, retard, and accelerate at pleasure, but it is not a muscle whose action we can at all times control. There is no such muscle, because the impression on the sensorium tending to call any particular set of muscles into action may be so powerful, that we are unable to control it. Who can prevent the action of the muscles of the arm when fire is suddenly applied to the fingers? Neither do we mean by the term muscle of voluntary motion, one which we cannot call into action during sleep. If our posture during sleep becomes uncomfortable, we call the muscles both of the trunk and limbs into action for the purpose of changing it. The uneasiness caused by the continuance of the same posture, sufficiently rouses the sleeper to make him will a change of posture, without rendering him at all more sensible to other impressions of a slighter nature, and his sleep continues.

What muscles, then, are more under command than those of respiration? We can on all usual occasions interrupt, renew, retard, or accelerate their action at pleasure; and if we cannot interrupt it for as long a time as that of the muscles of a limb, this depends on no peculiarity in the action of these muscles, but on the nature of the office they are called on to perform; and if we excite them in sleep for the removal of an uneasy sensation, and cannot control

them under a sense of suffocation, that is, in a state of greater suffering than we can voluntarily bear, all this is no more than applies to every other muscle of voluntary motion: but from the nature of our constitution we must breathe many times every minute, and we need not turn ourselves more than once in many hours,—a difference depending on circumstances which have nothing to do with the nature of the muscles we employ in either of these acts.

If we find the breathing going on in apoplexy after all voluntary motion of the limbs has ceased, it is because the sensation exists which calls on the patient to inflate his lungs, while there is none which calls for the action of the limbs. In the slighter states of apoplexy if the limbs be much irritated, the muscles which move them will also be called into action; and in the severer states, if the patient breathes, when no irritation of the limbs can excite him to move them, it is that the want of wholesome air in the lungs, after a certain interval, produces a more powerful impression than any other means we can employ. People have voluntarily held the hand in the fire, but no man ever voluntarily abstained from breathing till the lungs were injured. When at length no irritation, however violent, can impress the sensorium, the breathing ceases and death ensues. The mode of death sufficiently illustrates what is here said. We find the intervals of breathing becoming longer before it ceases. As the insensibility increases, a greater want of fresh air is necessary to excite the patient to inspire, till at length the total privation of fresh air no longer producing any sensation, can no longer excite this effort. The muscles of respiration then, it would appear, are as perfectly muscles of voluntary motion as those of the limbs, and are never excited but by an act of the sensorium. When there is no feeling to induce us to breathe, the breathing ceases. That on ordinary occasions we are unconscious of this feeling, in the common acceptance of the term, (that is, that it makes no lasting impression on the mind, for this is necessary to what we mean by consciousness,) unless the attention is particularly directed to it, is no proof that it has not existed. When we direct our attention to the act of breathing, especially if we breathe

more slowly than usual, we can distinctly perceive the sensation which induces us to inspire, and that it is a voluntary act which relieves it.

The same observations respecting consciousness apply to all the more trivial habitual acts of the sensorium. In playing on an instrument, we cannot tell which finger last struck the chord; in walking, we cannot tell which leg we last moved;—yet all such acts are strictly acts of volition: when we attend to them we can regulate them as we please, but in proportion as they are habitual we attend to them the less, and therefore least of all to the act of respiration. It may be difficult for a person not accustomed to reflect on such subjects, to believe that every time his leg is moved in walking, he performs a distinct act of volition; but he will be convinced of this if he observes the motions of those whose power of volition is impaired by disease. He will find the patient hesitate which leg to move at every step, and at length his attempts to move the limbs produce a confused and irregular action incapable of carrying him forward.

The act of expanding the chest is an act of volition; it is an act in ordinary breathing rendered extremely easy by the gentleness of the motion required, and the continual habit which renders it familiar, and is excited by a sensation proportionably slight, but which is as essential to it as stronger sensations are to more powerful acts of volition. Thus it is that on the removal of the sensorial power respiration ceases. It may be here said perhaps, that we have no instance of a muscle of voluntary motion continuing to act at short intervals during life; but besides that this is begging the question, it is to be recollected that the action of the muscles in ordinary respiration is very slight, and performed at considerable intervals, for it is only during inspiration that the muscles act. They are quiescent during expiration, which in our usual breathing is performed by the elasticity of the cartilages and the weight of the parts concerned. There is perhaps no muscle of the body which could not without fatigue maintain a similar action were there a cause capable of exciting it. In certain diseases we find both more powerful and more frequent actions of the muscles of volition continued for

years during the whole of our waking hours without any complaint of fatigue.

When the change in the blood, effected by respiration, no longer takes place, most of the pulmonary vessels lose their proper stimulus, red blood; and feel more directly perhaps the debilitating influence of black blood; their functions therefore begin to fail. In proportion as this happens, the blood accumulates in the lungs. The right side of the heart consequently experiences an increased difficulty in emptying itself, and the due supply of blood to the left side fails. By the operation of these causes both sides of the heart, particularly in warm-blooded animals, soon lose their power after respiration ceases. The arteries under such circumstances, it is evident, cannot long supply fluids proper for the purposes of assimilation. The nervous and muscular solids therefore deviate from the state necessary for the functions of life, which at length cease in every part.

The foregoing appears to be the order in which the functions always, with the exception of their instantaneous destruction, as above mentioned, cease in death; whether it be occasioned by injury of the sanguiferous or nervous system, or both.

Such then appears to be the nature of respiration. The first act is the impression made on the sensorium, the sensation excited by the want of fresh air in the lungs. We are enabled to supply it, and thus remove the uneasiness, by exciting certain muscles subjected to the will. Through nerves which are fitted for this purpose, we apply a stimulus to certain muscles which perform the act required.

I have already had occasion to observe, that the effort made in ordinary breathing is very slight. It is chiefly performed by the diaphragm, by the contraction of which the cavity of the chest being slightly enlarged perpendicularly, the pressure of the atmosphere readily causes the air cells to be distended with air; but if any obstacle occurs tending to prevent the passage of the air to the cells, a greater effort is required, and other muscles are called into action. It seems almost unnecessary to observe, that the sensation which induces us to make this greater effort, must, as the object is still the same, operate in the same way. The more

powerful sensation indeed, and the trouble the effort gives us, by calling our attention to it, enables us at once to perceive that it is an effort of the same kind with any other voluntary effort by which we endeavour to relieve ourselves from a painful feeling, and, like any other powerful voluntary effort long continued, produces the feelings of fatigue. Would any privation of air induce the struggle that we see in severe dyspnœa, if no sensation were excited by it? This sensation is excited in the sensorium through the nerves of the lungs, and all that follows is evidently the result of it.

The effort consists in two things, drawing the air into the chest with greater force, that is, expanding the chest more forcibly than the air may enter it with a greater degree of atmospheric pressure, and thus any obstacle to its entrance be overcome; and doing all we can to enlarge the passage by which the air enters.

The action of the muscles by which these objects are effected has been ascribed to a particular sympathy supposed to exist between certain nerves. But if the eighth pair of nerves which supplies the lungs originate near the nerves of the diaphragm, and certain muscles of the face, by which the nostrils are expanded, this cannot be said of the nerves of many other muscles equally called into action in severe dyspnœa, the muscles of the loins, &c.; and if we could by what is called sympathy of nerves explain the phenomena in question, it is not to be overlooked that the same sympathy must exist with respect to the abdominal as thoracic viscera, for the same nerves supply both.

We must therefore look for another principle to account for the relation which subsists between such acts and peculiar states of the lungs. The principle is at hand. The sensation which induces us to inspire forms a necessary link in the chain of causes; for every contraction excited in the muscles is evidently calculated to relieve this sensation in one of the two ways just pointed out. It either tends to expand the chest, or enlarge the passage of the air. It is impossible in such a case to overlook the act of the sensorium, which is sufficient to account for the phenomena without any particular sympathy of nerves, which on the other hand, I have

just had occasion to point out, is insufficient for this purpose.

The muscles employed in extreme dyspnœa are not confined to a particular set. They are the whole muscles of the trunk, and sometimes many of the limbs also, muscles which have nothing in common, except that they are all muscles of voluntary motion, and bear the same relation to the nervous and sensorial systems which all other muscles of voluntary motion do. Actions of the muscles of the face indeed are equally associated with sensations referred to the abdomen and the limbs, and arising from causes operating in them. Who can have a placid countenance while in agony from the operation of any cause to whatever part applied?

It appears from a great variety of experiments to which I have referred, that organs supplied with ganglionic nerves are subjected to the influence not of any one, but of every part of the brain and spinal marrow. No inference therefore can be drawn respecting the sympathies of any ganglionic nerve, as the term is here used, that is a nerve that either enters or proceeds from ganglions, according to the sense in which I use the term, from any particular distribution of nerves, or from the part where any particular nerve which contributes to the power of the ganglionic system originates. Vital organs are equally connected with every part of the brain and spinal marrow; and if we must not look for those partial sympathies with respect to their other functions, there is still less room, it is evident, to look for them in those functions where the sensorial power is concerned.

The sensorium evidently residing and operating at the source of the nervous power, there receives the various impressions received by the nerves, and there influences those nerves which convey its dictates.

I shall beg leave to conclude this paper with a short recapitulation of the principal points which appear to be ascertained by the experiments referred to in it.

The nerves are divided into two classes, whose functions essentially differ; those proceeding directly from the brain and spinal marrow, which, in the one direction, convey the influence of the parts of those organs from which they have their origin, and are the sole means of exciting the muscles of volun-

tary motion; and in the other, impressions which influence the sensorium: and the ganglionic nerves, which, while they also convey impressions to the sensorium, and occasionally excite the muscles of involuntary motion, usually excited by stimuli peculiar to themselves, have for their principal function one of greater importance, and which requires the combined influence of the whole brain and spinal marrow, that of supporting the various processes of secretion and assimilation, and are consequently in the strictest sense a vital organ.

Although the nervous power therefore stands only in the relation of a stimulus to the muscular fibre, whether of voluntary or involuntary motion, in no degree contributing to its power, which depends on its own mechanism; it is essential to the existence of the secreting and assimilating powers, which are immediately destroyed by withdrawing its influence.

Such is the relation which the nervous system bears to what may be termed the circumference of the animal body, in contradistinction to the sensorium, which may be justly regarded as its centre, to which that system bears a relation of equal importance; for it may be regarded as the means of connecting the organs of the sensorium with all other parts. In its power this system is independent of the sensorium, for we have seen it capable of all its functions after the sensorial power is withdrawn; but in all of them it is influenced by it, constantly in some, occasionally in others. It therefore bears the same relation to the sensorial organs which the muscles bear to it. As the muscular is independent of the nervous power, so is the nervous of the sensorial power. As the nervous, influence all the muscular, functions, those of the muscles of voluntary motion constantly, those of the muscles of involuntary motion occasionally; so the sensorial, influence all the nervous, functions, those of the cerebral and spinal nerves constantly, those of the ganglionic nerves occasionally. Thus all the functions of the nervous and muscular systems, by which we are connected with the world that surrounds us, are constantly subjected to the sensorial power; while the functions on which our life depends, with the exception of respiration, are only occasionally

so, and under circumstances in which the will has no control. With this exception the latter are all functions of the nervous and muscular powers alone. To respiration the sensorial power also is necessary, and therefore the nervous and muscular powers never long survive the loss of the sensorial power.

The nervous power which connects all the other powers of the animal body, effects so many changes in it, and has so large a share in connecting it with the world around it, cannot strictly speaking be regarded as one of the vital powers of that body, but as an agent employed by those powers; because it has been proved by direct experiment that it is capable of existing independently of the mechanism of the parts in which it resides, and therefore is not peculiar to that mechanism; and by the same means, that all its functions may be performed by galvanism, made to operate in the same circumstances in which the nervous power operates.

The experiments referred to in the foregoing paper suggested the use of galvanism in those diseases which arise either from a partial or general failure of the nervous power; and the success which has attended its employment has afforded another proof of its capability of the functions of that power. The diseases in which it has been chiefly employed are habitual asthma, the various forms of indigestion, affections of the spinal marrow, and general nervous debility*.

SEVERE LACERATED WOUNDS.

To the Editor of the London Medical Gazette.

SIR,

I SEND you the history of two cases, which, if they meet with your approval, I will thank you to publish in one of the first numbers of your very useful Journal.

I flatter myself they may not be unacceptable to your surgical readers, as they exhibit very clearly the powers of nature; and, in the treatment, the importance of not lowering those powers

* The above paper is condensed from the *Philosophical Transactions*, 1829.

of sustaining the digestive functions; of calming the irritative fever by a soothing plan; and, lastly, aiding the healing process by tonics and stimulants.

I am, Sir,

Your obedient servant,

GEO. WALTER JAMES,

M.R.C.S. & Phrenological Society, London.

West Bromwich, near Birmingham,
Dec. 26, 1829.

The Arm torn off, requiring Amputation at the Shoulder Joint.

A boy, 12 years of age, met with this severe accident by the rope of a coal pit breaking through, which, in its full swing, severed his left arm from his body, two inches below the acromion process.

On examining the stump, the muscles were found extensively lacerated; there was a long piece of the biceps hanging loose, the ligament of the deltoid muscle torn away, and the inner muscular layer separated from the shaft of the bone, which was splintered up an inch or more. This precluded the possibility of saving the head of the humerus; it was therefore determined, in consultation, to amputate at the shoulder joint. On examination of the separated extremity, the length of the ruptured nerves was very remarkable—it was evident they must have been torn from their foramina in the cervical vertebræ; but it was widely different with the arteries, for they gave way at the point of muscular laceration. The integuments presented the lineal evenness of a knife incision. There had been no hæmorrhage; still, however, the pulse was barely perceptible; the feet and hands were cold, and he was at intervals restless and faint. He had no recollection of the accident, and could not, without some difficulty, be roused to give a coherent reply. Upon the whole, he was in a very unfavorable state for an operation of such magnitude; I preferred, therefore, postponing it till the following morning, and ordered warm brandy and water, tea, and milk, to be taken as diet, and 20 drops of laudanum at bed-time. A tourniquet was applied over the artery.

The following morning (May 17th) he was much changed for the better; his pulse was good, although there had been considerable hæmorrhage in the night. He was not yet fully aware of the nature of his accident, but said "his

finger was gathering," which had been the case previously.

The artery being compressed against the first rib, the operation was conducted after the method practised by Baron Larrey, excepting that flaps were made by dividing the integuments with the scalpel, with the view of bringing the edges into closer apposition, which accordingly it enabled me to do. It renders, in my opinion, the external union very neat; and by the rapid and perpendicular division of the anterior and posterior muscles with the catline, much pain is saved, and accurate adaptation of surfaces ensured. This, I conceive, constitutes the superiority of the Baron's method. The division of the capsular ligament and tendinous attachments was finished also with the scalpel; and it may not be superfluous to mention, that the edge of the glenoid cartilage was taken off with uvula scissors, and the synovial membrane rasped from the surface of the glenoid cavity. Very little blood was lost during the operation, which I completed in about twelve minutes; but when pressure was taken off the subclavian artery, the vessel began to bleed slowly; a ligature was therefore applied to it, as also to a second, which bled rather freely. Firm pads were then fixed, to support the anterior and posterior flaps, and the stump dressed in the usual manner. The patient being put to bed, a little wine and twenty drops of laudanum were given. Light milk diet was ordered.

On the second day (May 18) I found him very uneasy; he had been all night in a state of high fever, with delirium, pulling all the bed-clothes off his bed. Pulse was 130, strong, and vibratory; tongue furred, and very dry; great thirst; no sickness; bowels costive.

He was ordered infusion of senna and salts to purge the bowels freely, and grs. v. of Pulv. Antimonial. every three hours afterwards.

During the succeeding eight days the fever ranged very high, insomuch that I found it necessary to bleed him on the 22d. On the 25th an abscess formed at the inferior angle of the scapula, which was opened on the 27th. Opiate draughts were given every night, and at any time, when in much pain, with great relief to the irritative fever. After which the sulphuric acid, bark, and wine, with an occasional purgative, constituted the internal treatment. Under this plan

the wounds healed, and he was quite well one month from the day of the operation.

The Arm and Scapula torn off by a Steam-Engine.

A boy, 11 years of age, was playing with the chain attached to a steam-engine, which passed over pulley wheels of large size. His arm became entangled, and was drawn in under the frame. The engine continuing to work, the whole extremity, together with the scapula, was detached from the body at the same instant. It appears probable the poor lad attempted to extricate it with the other hand: this also was drawn in.

The ulna was fractured, and the arm severely lacerated. The hæmorrhage was not great, and the pain comparatively trivial, as he was able to walk from twenty to thirty yards to his father, and told him of his accident; and whilst speaking, fell down in a state of syncope. On examination of the shoulder and back, in addition to the loss of the whole superior extremity, with the scapula, a considerable part of the trapezius, latissimus dorsi, and rhomboid muscles, was removed. Thus a very extensive wound was produced; but, fortunately, the integuments which remained were nearly sufficient to reflect upon the parts denuded. As might be expected, the boy lay for about two days in a state of great exhaustion, which was followed by correspondent irritative fever, and large suppurations; but by the use of tonics, and the free employment of opium in large doses, the boy's constitution rallied, the wounds healed, the fracture of the remaining arm united, and, in about three months, the cure was completed.

Note.—Both these patients are now in good health, and are being instructed to read and write; in which latter study they have made much progress.

REMOVAL OF A TUMOR FROM
THE SCAPULA.

To the Editor of the London Medical Gazette.

SIR,

ACCORDING to my usual custom, I examined the contents on the cover of the Medical Gazette for November 28th, previously to perusing the number;

III.—v.

and my curiosity was not a little roused by the interesting announcement of "removal of the arm, scapula, and clavicle, by A. Copland Hutchison, Esq." It was something new, and I hastily turned the leaves till I reached page 273. I was much disappointed, however, on discovering that the communication occupied only half a column; and was still more vexed to find that it consisted merely of an imperfect account of an operation which was supposed, or at least was said, to have occurred in naval practice, during the year 1808; for I fully expected to find a minute detail of a rare and enterprising operation in surgery, performed by Mr. Hutchison. He states that a patient presented himself at Greenwich hospital, a candidate for a pension, "on account of the total removal, by operation, of the arm, scapula, and clavicle." Mr. H. shrewdly enough suspects that the operation had been rendered necessary in consequence of injury from a gun-shot; and this is all the history of the case with which we have been favored. Now I think Mr. H. might have continued his speculations but a very little farther, and discovered that the greater part of the operation might have been, and most probably was, performed by the gun-shot, leaving for the surgeon the office of merely dressing the wound, as it were; for it must have been utterly impossible to have ascertained, at that period, how much of the limb was removed by the shot, and how much remained to be taken away by the surgeon.

His reason for adducing the case seems to have been a shade of similarity between it and the operation which was lately performed and related by Mr. Luke; but one much more in point is to be found in the Edinburgh Medical and Surgical Journal, vol. xvi. pages 66 and 215, detailed by Mr. Liston. And having endeavored to communicate what I conceive to be the real nature of Mr. Hutchison's case, I shall state some of the more important circumstances which have been recorded by Mr. Liston. The disease resembled an aneurismal state of the bone, and its progress was equally rapid and destructive with that of medullary sarcoma—the disease with which Mr. Luke's patient was afflicted. The patient was a lad, aged 16. In 1819 he had been admitted into the Royal Infirmary, but no operation being deemed advisable,

leeches were applied, and he was dismissed. When he applied to Mr. Liston, the tumor was of very large size, and firmly fixed to the left scapula, extending from its spine over all its lower surface; it also projected into the axilla, within half an inch of the nervous and vascular plexus. The arm was in a state of paralysis, much diminished in size, and the seat of frequent lancinating pain. On moving the tumor freely, it presented the sensation of crepitation. It was of three months duration, and for some time previous to his application had increased rapidly in size.

After attentive consideration of the case, Mr. Liston determined to remove the tumor. The operation was attended with the most violent hæmorrhage; and on its completion the subscapular artery, much enlarged, and which had been pouring its contents into the cavity of the tumor, was secured, along with two other large vessels.

The tumor involved the lower three-fourths of the scapula, and consisted of an outer sac composed of soft bony matter, the external surface of which was covered by a very dense membrane, whilst its inner surface was coated by projecting osseous spiculæ. In the middle of the sac lay the lower part of the scapula, partially absorbed and covered by coagulated blood and the remains of its muscles. Numerous blood-vessels of very large size covered the external surface of the tumor.

On the eighth day after the operation, the patient was so well as to be out of bed for a considerable time, and the wound was contracting rapidly by the process of granulation. On the twenty-first day he returned home, with every apparent chance of a permanent cure. His general health afterwards improved, but a bleeding tumor, of the size of a walnut, and of a purplish color, arose at that part of the wound where the subscapular artery had been tied. He complained of no pain in the part, and the arm became of the same size with the other. The fungus, however, proved to be a dense coagulum, and on its being removed the hæmorrhage was found to proceed from the substance of the bone. He was again brought to Edinburgh, and Mr. Liston proposed to remove the superior extremity, along with the remaining portion of the scapula and the half of the clavicle, but was opposed by the consulting surgeons.

Palliative means were therefore resorted to; the wound became filled with spongy granulations, and the head of the humerus was dislocated forwards, apparently from enlargement and disease of the glenoid cavity.

A second operation was again proposed by Mr. Liston, but was again objected to; and the patient was sent home, laboring under several of the symptoms of hectic fever. He continued to sink gradually, and died five months after the performance of the operation.

The diseased bone was sent to Mr. Liston, and is now in his collection of morbid preparations. It consists of the upper fourth of the scapula; portions of the acromion process, superior costa, and spine, are of their natural appearance; the coracoid process, glenoid cavity, and cervix, are entirely destroyed, and their situation is occupied by an irregular broken down tumor, composed of osseous spiculæ and cancelli, irregularly disposed, and forming cavities which contained blood.

Mr. Liston deeply regrets that he did not at least attempt to save the patient's life, even contrary to the advice of the consulting surgeons, by removing the extremity and the remaining portion of the scapula which had become affected by the disease; for the post-mortem examination shewed that the disease was situated only in the scapula, and did not involve the whole of it.

The case, I think, is a highly interesting one, and for that reason, and because it is, in my opinion, more in point than that mentioned by Mr. Hutchison, I have directed the attention of your readers towards it.

J. M.

Edinburgh, January 1830.

APPLICATION OF MELTED WAX TO EXCAVATED ULCERS.

To the Editor of the London Medical Gazette.

SIR,

By the Medical Gazette of the 26th of December, I am happy to learn that the plan of treatment of applying melted wax to excavated ulcers in the manner recommended by Mr. Stafford, and first introduced at the St. Marylebone In-

firmly, and which has been used at that institution for some time past, with the greatest success, has also been approved of at the Westminster, St. George's, and other hospitals. Since the publication of Mr. S.'s work, at least one hundred cases have been treated here by Mr. Phillips, uniformly with a beneficial result. If the following case be considered worthy of notice, you will oblige me by inserting it in your valuable journal.—I remain,

Yours, &c.

ALEXANDER WATRINS,
House Surgeon.

Jan. 4, 1839.

F. H. admitted Sept. 3d, with an extensive ulceration on the leg, which, according to his statement, had existed for the last seven years. The ulcer was about six inches in length, and between four and five in breadth; it had the appearance of a dark unhealthy sore, with ragged edges. The man had evidently suffered extremely in his health. The wound was ordered to be dressed by applying poultices of linseed meal and a piece of lint, dipped in the tinct. benzoin. comp. to it; also to take pil. hyd. submur. comp. gr. v. omni nocte, with a wine-glass of the infus. quassiae c. magn. sulph. ter die; which treatment was continued for about four days. The ulcer was afterwards dressed by the wax being applied to it. Upon removing the first dressing of the wax, the leg had evidently begun to assume a healthy appearance. In the course of three or four more dressings, granulations had arisen even with the sound parts. Mr. Phillips then ordered it to be treated by applying pieces of simple dressing to the edges of the sore, and covering the centre of it with dry lint. The man in a very short time was discharged perfectly cured.

The composition we use at this institution, is composed of one part of Venice turpentine, and two parts common wax, melted together.

PRIZES AT THE LONDON UNIVERSITY.

*Letter of "A University Student,"
concluded from p. 435.*

In resuming the subject which occupied a former letter, we now come to

consider such arrangements as may be best adapted for the equal distribution and determination of prizes in the London University. But before doing so it may be useful to recapitulate, in a few words, the objections to the present arrangements which have been already pointed out. We have endeavoured to shew, and we trust with sufficient perspicuity, that the present system, instead of creating a spirit of zeal, and of encouraging exercise of talent, is calculated to strike at the root of emulation, and to destroy all ardour in the pursuit of knowledge;—that competition on such a system is unworthy the attention of, nay, almost reflects disgrace upon the senior student; and that to the junior it presents an object so hopelessly above attainment, that it is better calculated to induce within him an idle and careless disposition than to foster talent, or excite industry;—that to the one it holds out no encouragement to labor, because the object it presents should be much beneath his notice: while to the other it is equally uninviting, because the rewards it offers are unreasonably above his reach;—that the junior it discourages, and the senior it degrades;—that it prostrates all distinctions of talent, opportunities, and age, in its neglect of the acquirements of the competitors;—and finally, that while it feeds pride, and fosters presumption, it depresses youthful genius, and quenches ambitious ardor.

We hesitate not to assert that no other plan could be proposed which is recommended by so few advantages, and is exposed to so many objections. The only desirable objects, which worthy competition can hold out, are not only not attained, but never can be attained by it; and that, if it be persevered in, it must produce one or both of the following alternatives—a contempt for literary rivalry among all classes of students, or a vain and unmerited superiority on the part of such as may only be distinguished for more matured minds, or for having enjoyed more ample opportunities of instruction. The value of all rewards must depend on their adaptation to the acquirements and standing of the competitors. If there be not some proportion maintained between the object to be gained and the talents of the pursuer, it appears to us nearly self-evident that there can be neither good nor glory emanating from

the competition. If a common object of reward be held out to minds the most different, to men the most unequally endowed, it requires little acuteness to perceive that the spirit of such an arrangement is subversive of all good; that it can never stimulate the idle to activity, nor remunerate the active for his toil. The grand object, therefore, of all teachers, in whatever department of science they may be situated, should be so to arrange and proportion their rewards that every student may be induced and enabled to compete; that the subject of rivalry may be adapted to the varying faculties of the competitors; and that, while all may have a fair prospect of success, none may be excluded from the list by the unfairness of the contest, nor frightened from the chase by the unequal advantages of those against whom he runs. To secure, consequently, a fair and useful competition, the competitors should be arranged into classes, according to their opportunities, their learning, and their present standing in the university. Students of the first year should be classed together; students of the second year should compete together; and students of the highest literary attainments should be enlisted into a separate contest. In accordance with this view, therefore, we would propose the following arrangement:—

Supposing that there are students of five years standing at the university, we would classify these into five distinct divisions. Each division would comprehend students of the same year, or same standing only; and in order that all the talent within each division might be elicited as much as possible, we should further propose that there be three or more grades of rewards allotted to each division; and not only so, but that any student who may consider himself superior to his division, shall have the liberty (if his professor approve) of enrolling himself for competition in a higher division; but in doing so shall be supposed to abandon all views of competition within his own. The prizes in each of these subdivisions should be allotted to the competitors according to the comparative excellency of written extempore answers to questions proposed to them by their professors or examiners at three different periods of the session; viz. at their entrance into the class, at the middle of the course,

and at the termination of the lectures. At their entrance into the class, that the amount of knowledge which they bring with them to the subject of the lectures they are about to hear may be ascertained; at the middle of the course, that the attention which they pay, and the progress which they make, may be known; and at the termination of the session, that, by comparing the amount of their present knowledge with that which they possessed at the commencement of the course, a proper estimate may be made of the advantages which they have derived from the instruction of their professors.

In estimating the comparative merits of these answers, reference should rather be had to the improvement indicated by the last two series of answers when contrasted with the first, than to the abstract and absolute knowledge of the competitors, because these prizes should not be regarded as rewards for abstract amounts of knowledge, no matter where, when, or how acquired, but for progress and improvement made while under the teacher's care.

In addition to these graduated prizes, which we would thus strictly proportion and deal out according to the pretensions of the competitors, we would recommend that a set of university prizes be offered for general competition, without any regard to circumstances of age, opportunity, college standing, or professional views.

By such regulations as the foregoing, it is humbly presumed that the energies and talents of all the students would be called forth; and that individually they would be secured in all those rights and interests which the present existing system so unhappily fails to produce. In order to make the certificates of merit much more respectable and worthy of competition, we would advise that they should affix to them different grades of distinguishment; that he who comes next to the medallist should have one which imparts more honor than the one which is given to him whose answers are much inferior, yet still entitle him to that reward. We anxiously hope that the directors will, ere long, establish either this or some similar plan, convinced, as we are, that nothing could be more conducive to the interests of the establishment, more encouraging to the students, or more advantageous to society. Then, and then only, will the light of

genius expand; will fair science be successfully sought after, cultivated, and eagerly pursued; and our *Alma Mater* rank as the most harmonious and efficient institution.

When the labors and zealous attention of the students are carefully drawn out and assisted; when there is every facility for obtaining knowledge, added to a well-directed stimulus to exertion; when the general nature and groundwork of science is early implanted in aspiring and talented minds, then may we look forward to innumerable improvements. While, so long as genius is cramped by injudicious laws, and industry discouraged through despair of victory; while talents the most different are indiscriminately treated, and rewards of the same value are offered upon equal terms to the inexperienced tyro and matured student, nothing can be anticipated but petty jealousies arising out of unfair competition and heartless apathy, as the result of unmerited disappointment.

MEDICAL GAZETTE.

Saturday, January 16, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Ar-
tis Medicæ* tuar; potestas modo veniendi in pub-
licum sit, dicendi periculum non recuso."—CICERO.

LAW versus PHYSIC.

We fear our readers will begin to suspect that our remarks on the case of Mr. Davies are destined to last as long as the recent commission, *de lunatico inquirendo*. There are, however, so many important considerations connected with the subject, and the termination of the inquiry affords so striking an illustration of the uncertainty of a verdict where this is chiefly dependent upon medical evidence, that we deem the subject worthy of very particular attention. Here the result cannot fairly be ascribed, as often it may, to the inexperience or doubts of the witnesses in support of the commission; for among them we find included all practising in that peculiar line resident in the metropolis, and ce-

lebrated for their supposed knowledge in cases of lunacy, and many of them accustomed to give testimony in similar inquiries. Some there were, it is true, who, little experienced in the malady, broke down under the cross-examination; while others, by their pompous folly, exposed themselves by their own proper demerits, without any assistance from the counsel: and this leads us to observe that these mortifying exposures might have been avoided, had the cause been conducted with equal talent and address on both sides;—but this was very far from being the case—for the equity gentlemen were beaten all to nothing by the *nisi prius* lawyers, who, during the whole proceedings, kept entire possession of the Court, and confined each witness so entirely to facts as to exclude that kind of collateral and explanatory evidence which heretofore has been admitted on such occasions. To these circumstances must be attributed the undeniable fact that, from the very onset to the termination, the witnesses for the commission were looked upon with a suspicious eye, and, in fact, regarded as parties implicated in the result, and contending for the victory; an impression which the evidence of some of them tended strongly to increase.

By the close mode of examination above alluded to, much extraneous matter is avoided, and the question reduced to a more tangible form. It has, however, this disadvantage—that it must occasionally preclude evidence which may be essential in ascertaining the true condition of a person's mind; such as information relative to his conversation and conduct, derived from his friends or others about him;—this second-hand testimony, though it may be convincing, being by law inadmissible in such a case. Upon reconsidering the evidence, it appears to us that it was in great measure the manner in which the medical witnesses were thus "cabined, cribbed,

confined, bound down," that gave to their evidence such a disjointed, inconclusive, and unsatisfactory character.

Although we concur with the general feeling, in approbation of the issue in this particular case, we confess we are not without some anxiety as to its effect upon future commissions. We cannot forget the clergyman and his books, mentioned in our first article (see *Gazette*, Jan. 2); nor, while we admit that medical men are somewhat too easily satisfied that an individual is insane, can we shut our eyes to the fact, at least equally apparent, that mankind in general are liable to be deceived by the calm of a lucid interval, and the cunning self-possession of a lunatic who knows that he is suspected of insanity. It is a remarkable fact, that all the physicians who have particularly devoted themselves to the study of insanity, coincided in opinion. Is this, then, to be taken as a proof that they saw what escaped the less experienced tact of others; or, as we hinted last week, that they were unconsciously swayed in their opinions, by "a foregone conclusion?" But the consultations were not limited to what are vulgarly called "mad doctors." Indeed the number of medical men whose opinions were taken exceeds all precedent, having amounted on both sides to not less than forty! and this very circumstance must have contributed very much to the result, for the natural inference of a jurymen is—that that cannot be very clearly marked which it requires so many witnesses to prove. We are perfectly convinced that the evidence of three, or at most four medical men, if judiciously chosen, would have had infinitely greater weight with the Court; indeed, as it was, the jury could not fail to be completely puzzled, and probably they discarded the medical evidence altogether, forming their judgment on their own examination of Mr. Davies personally.

It is not easy to account for the unwonted and preposterous accumulation of evidence in this case, but it has proved a terrible aggravation of evils already sufficiently great. Another unfortunate circumstance, too, was the length of time which elapsed between the petition being presented to the Chancellor (August 21st) and the day appointed for opening the commission, (December 14th); and, in fact, the interval would seem to have been spent on either side in accumulating numerical strength for the day of battle.

We observe that the present Chancellor adopts a different method from that pursued by Lord Eldon in procuring medical information respecting an alleged lunatic: the latter used to send two physicians peculiarly practising in cases of this nature; whereas Lord Lyndhurst sends one only, and associates with him a general physician. We have no hesitation in preferring this method to the other; but, at the same time, we doubt not it leads to less unanimity of opinion. We will take the case of Mr. Davies by way of illustration. The Chancellor appointed on his part two physicians, Sir George Tuthill and Dr. Macmichael, the one attached to Bedlam hospital, the other a general physician. Each paid him two separate visits between the end of August and seventh of September, when they visited him conjointly. The following day they wrote distinct reports to the Lord Chancellor. Sir George Tuthill's report was very elaborate, detailing a history of the case, and summing up thus—"Mr. Davies is now of unsound mind, and unfit for the management of himself and his affairs." Dr. Macmichael sent a very general and brief report, but did not come to the same conclusion, and, in fact, did not then hazard a positive declaration as to the actual state of Mr. Davies' mind. Of course the Chancellor could not decide, and other physicians were appointed to examine

and report, and more affidavits were made. The new examiners were still more at variance than the old; a commission was granted, and under these conflicting circumstances it was opened.

Whether the medical evidence would have sunk under the weight of its own demerits, or required the cross fire of Messrs. Brougham, Adolphus, and Broderick, to produce this effect, we know not; but certainly our profession owes little to the discretion evinced by most of their brethren who were examined, and nothing whatever to the courtesy of the counsel. We have already said in former numbers, that we fully admit the imbecile inanity of some, and the bombast and pretension of others, and that these deserved all and more than they met with; but there were others whose evidence was of a different stamp, and who were, in our opinion, harshly and unjustly dealt with. The character of a medical man, like a woman's reputation, once tainted, is never wholly recovered; and a talented and honorable practitioner may be ruined by mere forensic wantonness. We do not set ourselves up as the defenders or extenuators of any man's conduct who errs with his eyes open; but when a respectable member of the profession is unjustly attacked, or is essentially misrepresented, we regard it as our duty to justify him as far as the facts within our knowledge afford us the means. We here particularly allude to Dr. Burrows in relation to the case of Mr. Davies; and the unhesitating manner in which we have but recently expressed opinions at variance with those of that gentleman, as well as the general tenor of our former articles on the subject of this same commission, will shew that we are not influenced by any undue partiality towards him. We observed, with regret, that Mr. Brougham made two specific charges against Dr. Burrows, which, as they

were entirely unfounded, we are compelled to suppose originated in his having overlooked circumstances distinctly proved in evidence.

First, he asserted that Dr. Burrows had signed a certificate of Mr. Davies' insanity, although he had not seen him for ten days previously, and that he had dared to tell the jury so.

Second, that Dr. Burrows' evidence was not to be trusted, because he came there with the bias of interest; for if his client was found of sound mind, the Doctor would lose the profits of his residence in Clapham Retreat.

Now, in respect to the first charge, it was refuted by anticipation in the evidence of Dr. Burrows, who swore that he never signed any certificate of Mr. Davies' insanity; but that this was done by Dr. Blundell and Mr. Lawrence! while even if he had signed such certificate within ten days after having seen him, it would not have been illegal provided it was not to consign the patient to his own asylum. It is proper for medical men to be aware, that the Act for the care of the Insane (Sect. 29) allows fourteen days to intervene between a visit and signing a certificate.

In respect to the second charge, Dr. Burrows farther swore, that having ceased to attend Mr. Davies from the 4th August, he was never consulted about his removal from his own house to Portland Terrace, nor about his removal thence to the Retreat,—both of these measures having been adopted upon the advice of others. Besides this, which is in evidence, we can state from the examination of authentic documents, that Dr. Burrows only consented to receive Mr. Davies on the understanding that his residence at Clapham was to be very short. We know farther, that Dr. Burrows made various attempts at different times to have him removed, and that his stay was only protracted in consequence of

his legal advisers yielding to his own earnest desire to remain rather than go into lodgings.

These allegations, therefore, against Dr. Burrows were as cruel as they were unjust. We can enter to the fullest extent into the raillery, and satire, and argument of the pleader, anxious to make good his case; but the deliberate advancement of charges of this serious nature, spoken in voice which is echoed by the whole press throughout the land, and which charges are yet utterly destitute of foundation, is quite inexcusable. Neither, by the way, can we compliment the newspapers on the manner in which either the evidence or the speeches of the Counsel were reported. From the omission of everything making in favor of certain individuals, and the insertion of every thing which appeared to tell against them; we cannot avoid suspecting that some of them at least were not quite impartial; and here, too, we observe, that Dr. Burrows seems to have been especially marked out for animadversion, as if he had given stronger evidence than the others in favor of the insanity of Mr. Davies. So far, however, was this from being the case, that at the close of his examination he distinctly stated, in answer to a question put by the jury, that if the subject of the inquiry had been placed, "as he advised," in his own house, and kept free from all exciting causes, he would soon have been well; but that from various circumstances detailed in the course of the trial; he had never been submitted to medical treatment.

That we have so lately publicly differed in opinion from Dr. Burrows, renders us not the less anxious to defend him from unjust aspersion, while the circumstance may add something to the weight of our remarks, by shewing the sincerity with which they are offered.

MEDICO-BOTANICAL SOCIETY.

A few years ago, a society under the name of Medico-Botanical was established, for the purpose of furthering botanical science, more especially its application to the healing art. Many distinguished men were enrolled among its members; and Dr. Maton, in the first instance, and subsequently Sir James M'Grigor, became its Presidents. A Council and Secretary were appointed, and it had all the paraphernalia of a complete scientific institution. Unfortunately, however, for all parties,—more especially for that individual himself, Mr. Frost was (we presume in consequence of his exertions at an early period of its existence) elected to the anomalous office of Director. What the exact powers delegated to him, in consequence of this appointment, may have been, we know not; but the privileges which the Director himself seems to have thought were vested in his person, were of no very limited description. We find the Presidents above mentioned successively resigning, and Mr. Brown, one of the most distinguished botanists of the age, expelled on some paltry pretence. At the same time, several other eminent men who had become members withdrew their names, and it required the active exertions of those who remained, to keep the Society from falling to the ground. But what did even more injury to it than these circumstances, was the absurd and, indeed, perfectly ludicrous manner in which all the kings and emperors in Europe were successively elected members. This ridiculous proceeding is generally understood to have emanated from the Director; and it is to be presumed that the name of Lord Stanhope, who had now become President, served as a passport to foreign courts, where the simple application of a more obscure individual could never have found admittance. What the different potentates who were thus honored would have thought of the compliment paid to them, had they been aware of the rank which the Medico-Botanical Society holds among the scientific institutions of this country, it is not difficult to conjecture. These proceedings, though sufficiently ridiculous, were innocent emanations of vanity, originating (it is charitable to suppose) in the somewhat exuberant zeal of the Director, but which would never have

led to the awkward predicament in which that gentleman now stands.

In process of time it occurred to the Council, that it would be proper to inquire into the finances, and to regulate the expenditure of the Society; and a Committee was appointed for this purpose. It appeared that the monies had passed through the hands of the Director and Secretary, and application was made to the former for his accounts, which are said to have been promised, delayed, and ultimately refused. A motion was then passed by the Council, and confirmed at a general meeting, held a few days ago, by which Mr. Frost was suspended from his office, and it is probable that the absurd appointment of Director will be altogether abolished.

While this revolution against his authority was going on, it is not to be supposed that Mr. Frost was idle, and, desirous of punishing the mutineers, he had made an application to His Royal Highness the Duke of Cumberland, who, we believe, is one of the Vice-Presidents. The nature of his communication with this illustrious personage is not exactly known: according to one version, the Director was desirous of receiving his sanction for himself taking the President's chair; but the other and more probable account is, that he wanted His Royal Highness to supersede Lord Stanhope, who had recently been led to take an unfavorable view of Mr. Frost's management of the Society. The Duke of Cumberland seems, in the first instance, to have given in to the wishes of the Director, and is even said to have obtained an autograph from His Majesty as Patron, sanctioning the proposed measure. Fortunately, however, some circumstances brought to the ears of His Royal Highness the startling facts of the Earl of Stanhope holding the president's chair with the full confidence of the Society, and that the proposal of the Council to suspend the Director for withholding his papers, &c. had been confirmed by a general meeting of the members.

Heretofore, this Society has been rather in bad odour with the medical profession, a circumstance partly to be attributed to the resignations above mentioned, and partly to the extraordinary system of puffing which had been adopted. Now, however, that its ma-

agement is likely to be conducted on more enlightened principles, we augur better of its future prosperity.

EXTRACTS FROM JOURNALS, *Foreign and Domestic.*

CURE OF SQUINTING.

PROFESSOR PROSSI, of Turin, who has devoted much attention to the investigation of strabismus, is of opinion that when congenital, which is the most frequent variety, it may go off spontaneously about the age of puberty—otherwise it continues the same through life; and accidental squinting, when neglected, may also become incurable. This difference in the results leads him to the belief that this affection of the eyes depends in certain cases on an imperfection in the parts concerned in vision—an imperfection which sometimes disappears when the parts are fully developed; and sometimes remains notwithstanding all the efforts of nature and art to remove it. A malformation of the orbit may change the natural direction of the muscles attached to it; and thus the progress of ossification may alone be sufficient in certain cases to remove congenital squinting.

It is well known that the light may produce strabismus, by constantly striking the eye in an oblique direction, thus giving rise to a permanent action of certain muscles, and corresponding inaction of their antagonists. In order to restore the just equilibrium between the muscles, M. Prossi has invented spectacles, contrived in the following manner:—The glasses, which are entirely plain, and of a circumference equal to that of the orbit, are covered with black varnish, or with thin pasteboard of the same color. In each glass thus prepared, two linear openings are made, in such a direction as to cross each other in the centre, at a point corresponding to the pupil. One of these openings is horizontal, while the other is oblique, in the same direction as the eye is morbidly turned, beginning at the side towards which the strabismus is directed, extending towards the opposite side, and progressively enlarging, so as to form at this end a rounded opening of from four to six lines in diameter. In consequence of this arrangement, the greatest body

of light which comes to the eye enters at a point directly opposite to that towards which the pupil is habitually turned; and as the muscles direct the eye in some degree by instinctive movement, they will now tend to keep it in a position just opposed to the squint, and in this way the deformity gradually disappears. It is of great importance that the obliquity of the opening should correspond exactly to that caused by the strabismus, otherwise no benefit results. The period required to effect a cure varies in different cases; but it is necessary to persevere in the use of the spectacle till it be complete.—*Memoires de l'Academie de Turin*.

NUMBER OF "ENFANS TROUVES" IN PARIS.

From 1806 to 1828, the number of foundlings in Paris rose from 4238 to 5947 annually. With the exception of some irregularity dependent on causes not very apparent, the increase was progressive, and evidently coincided with the augmented population. During these 23 years the mortality of the infants at the hospital varied considerably. Up to the year 1814 it was from 400 to 700; in 1814 it rose to 1000; then to 1300, and even to 1600. The causes of this are easily explained. Among the infants brought to the hospital a great number were very feeble, ill-conditioned, or diseased. On other occasions most of the infants were sent to nurse; but in 1814 the charge was confided to the *sœurs de La Charité*, instead of sending them out as before; and this rendered the mortality at the hospital necessarily greater. Nevertheless, the actual number reared was considerably increased.

The extent of the establishment altogether may be gathered from the facts that there are about 4000 nurses in the country, 30 at the hospital, 40 servants, and 22 *sœurs de La Charité*. The expense of each child is estimated at 100 francs per annum.—*Journal Universel des Sciences Medicales*.

HYDRO-RACHITIS CURED BY SETON.

Authors are generally agreed in regarding hydro-rachitis as necessarily fatal. Dr. Ghidella has recently tried the same method as is adopted in hydrocele. An infant, three days old, had a congenital tumor, of the size of a small egg, on the site of the sixth cervical ver-

tebra, painful to the touch, translucent, like a fresh egg, and diminishing on pressure. The tumor did not increase in size when pressure was made on the fontanelle. A long needle, armed with a waxed thread, was passed near the base of the tumor, and the thread left, as in the application of a seton. Next day the parts were fomented with a decoction of the bark of the pomegranate in wine, by which a pretty brisk inflammation was excited; a poultice of bread and milk applied; and the seton continued for forty days. The second month the tumor was empty and shrunk, like a dried fig. Nutrition was re-established, and the little patient did well.—*Giornale de Chirurgia Pratica*.

ARM PRESENTATIONS.

Dr. Samel, of Konitz, has endeavoured to prove that, in certain cases, amputation of the arm, when this presents in parturition, may be not only useful but necessary; and to illustrate his views he relates the two following examples. In both the foetus was placed transversely, and the waters had come away for thirty-six hours. There were distinct signs of the child being dead. In one the arm had made its appearance prematurely, and forcible efforts at extraction had been made by pulling it, until the shoulder, and part of the thorax, were impacted in the lower part of the pelvis. The shoulder of the expelled arm was wedged against the inferior border of the arch of the pubes, and the arm itself was swollen to four times its natural size. It was black; partly deprived of cuticle; and in a state of emphysematous putrefaction. The mothers were reduced to the extremity of exhaustion, with cold sweat, almost imperceptible pulse, and ardent thirst. They complained of constant pain in the belly, and the uterus was spasmodically contracted on the foetus, but without regular pains. The genitals were swollen, dry, hot, and painful. In one case the umbilical cord presented along with the arm, and was putrid.

It was impossible to make the usual examination, because the fingers could only be introduced as far as the axilla of the foetus, but it was ascertained that there was no deformity of the pelvis. In both cases the right arm, with the shoulder, rested on the inferior edge of the arch of the pubes; the back of the hand turned upwards and outwards; the thumb towards the left hip of the

From these circumstances it appeared that the face of the child was towards the left iliac fossa, and the feet towards the right side, the back being turned upwards and forwards. In both patients the urine was evacuated in the first place by means of a catheter; in both anti-spasmodics were administered, and frequent injections were thrown into the vagina, consisting of a mixture of oil and infusion of camomile. These means were attended with little benefit, and the following operation was at last recourse to. The women were placed across a bed, with the thighs raised; then the accoucheur introduced the hand, not without difficulty, and much pain to the mother, under the arm of the child, but it was impossible to get farther up than has been already mentioned. An effort was cautiously made to push back the trunk, so as to afford room to get at the feet, but without success; and every stage of the proceeding occasioned excruciating pain. It was then resolved to cut off the arm, which was done without difficulty by means of a probe-pointed bistoury. Twisting the limb accomplished its separation, which the cutting instrument had left incomplete. No pain was given to the mother in either case; and in both they expressed relief. It was then found practicable to push back the trunk, and to arrive at the feet, situated to the right; after which the delivery was easy. Both mothers did well.—*Rust's Magazin*.

DUPLEX INDIVIDUALS.

A case very similar to that of the Siamese youths was exhibited in London in 1723. Two females of the adult age were united together, but their mental and physical functions were perfectly different; they were born at Szony, in Hungary, in 1701, and were exhibited in many parts of Europe. They were united at the back, below the loins, and had their faces and bodies placed half sideways towards each other; they had one anus and one vulva. The viscera were double, except that the vagina and recta united; there were two bladders and urethra opening separately; the sacra were blended into one and had but one os coccyx; the lungs were united before the origin of the bronchi, and the inferior cavæ were united in the same part. They were not well made; and

the most powerful (for they had two wills) dragged the other after her wherever she wished to go. At six years old one had paralysis of the left side, and was ever after weaker than the other. There was a difference in their functions, in health and disease; they also had different temperaments. Neither alvine nor urinary evacuations were performed at the same time by both; the menstrual function appeared at different times; one having been indisposed a week or more before the other, sometimes one sometimes the other would be most disordered at this period. When one was asleep the other was awake; one had a desire for food when the other had not. They labored under the small-pox and measles at the same time, but other diseases separately. They were called Judith and Helen. Judith was convulsed when Helen was well; one had catarrh and colic, while the other was healthy. Their intellectual powers were different; they were brisk, merry, and well bred; could read, write, and sing prettily; could speak several languages—Hungarian, German, French, and English. They died (according to the account of the Phil. Trans. v. l.) together; but this was not the fact, for M. Moreau de Lasarthe informs us, in his work, *Sur les Monstruosités*, "that one had been feeble from birth, and died after a very protracted illness, during all which period the other was healthy; but at the moment the former expired, the latter was engaged in conversation, and manifested no symptoms of suffering; about four minutes after the death of her sister, her eyes rolled, she seemed for an instant to be convulsed, and immediately expired;"—shewing, notwithstanding the independence of each other as to mental operation, that they were nevertheless involved in one common condition of mortality. They were buried in the Ursuline Convent, at Presburgh. This case is recorded by Haller, *De Monstris Op. Minora*, v. 3. lib. 1. c. 28. Similar cases, lib. 2. c. 26; also by C. Drieschii *Hist. Magnæ Legationis Cæsareæ*, &c. p. 441.

A case somewhat similar is recorded by Buchanan, in his *Hist. of Scotland*; the man lived in the reign of James IV. was 28 years old, and one of the bodies expired some days before the other. Some of the French periodicals have fallen into a mistake, when they refer the history of this monster to the reign

of James III. The case is published in one of their own journals—*Journ. des Savans*, 1684, p. 346. This double man was united at the umbilicus, but single below that part. The king ordered him to be brought up with care; he made a rapid progress in music. The two heads learned many languages, they discoursed together, and the superior halves sometimes struck each other, though in general they lived in concord. If the inferior part of the bodies was pinched, the two resented it at the same time. On the other hand, if one was irritated superiorly, he only experienced the effects. One died several days before the other. *Rerum Scotticarum Historia*, vol. lxiii. p. 44, Auct. G. Buchanan. Zacchias describes an analogous case of an individual, aged 28 years, who had another hanging from the chest. The first was baptized Lazarus Colloredo, the second John Baptista. The latter was nourished by the food taken by the former. He was so weak that respiration was scarcely perceptible; he seldom opened his eyes, and hence the narrator, who was physician to his holiness, doubted much that he had a rational soul, and equally dubious whether baptism should have been applied. The case is related in his immortal work, *Quæstio, Medico-legales*, lib. vii. tit. i. quæst. ii. Ambrose Paré describes a similar case; the individuals were aged 40: lib. xxiii. c. 3. A boy, aged six years, is described, who had the lower extremities of a brother suspended from the navel; he felt what was done to the brother, yet he could not move its limbs, which were cold. *Phil. Trans.* vol. lxxix.

Cases similar to Ritta-Christina are recorded, Haller op. cit. lib. i. c. 21-28. A case exactly similar described in the *Journ. des Savans*, 1684, p. 27; the lower part of the body was male; there was no rectum; and death took place on the 7th day. Haller also details a case nearly similar. Two well-formed female infants were united at the chest and epigastrium; the labor was difficult, they were born dead. The funis umbilicalis contained four arteries and but one vein; the abdomen was single above and double below the navel; there was one liver with two gall-bladders, one large heart, with all the vessels double; op. cit. c. 29. He relates many similar cases of monstrosity in the human and inferior classes of animals,

c. 30, 31, and 32. An infant with a double head was described by Sir Everard Home, which lived two years. *Phil. Trans.* vol. lxxx. The skulls are in the Hunterian Museum at the Royal College of Surgeons. An example of an ox with a double head, and a cow with two heads and necks, that attained the full size, is described in the same work, vol. xlix. In the *Mem. de l'Acad. des Sciences*, 1733, p. 366, Winslow relates a case of an Italian who had two heads; the second was connected to the chest below the third rib. Whatever touched the additional head was readily felt. For further exemplification of the various forms of monstrosities, we refer the reader to Haller's work so often quoted, to *Sœmmering's Abbildung, und Beschreibung einiger Missgeburten, &c. folio, Mentz, 1791*, which productions are replete with references. M. Mureau de Larçarthe sur *Monstruosities*, may be consulted with advantage; and also Regnault, *Les Monstres, ou les écarts de la nature produits, soit dans l'espèce humaine, soit parmi les quadrupèdes, &c. en planches coloriées, folio, Paris, 1775*. *Mem. de l'Acad. des Sc.* 1733, 4, 8, 9. The various modern Cyclopediæ contain many other references, but are silent on many now cited. For a complete refutation of the vulgar notion that monstrosities are caused by the mother's imagination, the reader may refer to Haller's op. *Minora*, vol. iii.; the work of M. Geoffrey Saint-Hilaire; the *Dict. abrégé des Sc. Med.* 1824, art. *Monstruosities*; *Rees' Cyclopediæ*, art. *Monster*; *Edinburgh Medical and Surgical Journal*, 1826, and *Ryan's Manual of Midwifery*, 1829.—*Med. and Surg. Journ.* January.

HOSPITAL REPORTS.

EDINBURGH ROYAL INFIRMARY.

Extraction of a foreign body from commencement of Oesophagus—Pharyngitis.

DONALD M'DONALD, æt 19, admitted under the care of Mr. Liston, Aug. 19.

Three days ago, when taking his porridge, he swallowed a portion of the plate, about an inch in length, and of the form of an equilateral triangle. It stuck at the upper part of the oesophagus, one corner resting

on the vertebræ, and another upon the posterior part of the cricoid cartilage. It was removed with forceps by Mr. Liston. Has great pain in swallowing; neck drawn forwards.

20th.—Leeches have been applied to the neck, and he now feels much easier.

Leeches were repeatedly applied, the symptoms subsided, and the patient was dismissed cured.

*Compound Dislocation of the Ankle Joint—
Longitudinal Fracture of Sacrum, &c.*

John Haggart, æt. 18, admitted under the care of Mr. Liston, Sept. 29. Had fallen on the pavement from the top of Holyrood Palace, a height of 76 feet. Immediately below left external malleolus there is a wound, an inch and a half in length, through which the astragalus, broken into numerous fragments, protrudes. The foot is displaced inwards. There is little or no bleeding, and the skin around the wound is of its natural appearance.

The comminuted astragalus was removed, the margins of the aperture were brought together by suture, and the limb was placed on M'Intyre's splint. There was also dislocation of the left humerus, which was easily reduced.

30th.—He complains of severe pain in the back and loins; but there is no wound or discoloration of the integuments in these regions, and no crepitus can be felt. Pulse 96, and of moderate strength. Great drowsiness, and considerable mental aberration.

October 4.—There is slight discharge from the wound, and the integuments of the ankle retain their natural appearance. Has slept ill; pulse 100; bowels open.

Habeat haustum c. Liquor Sedativ. ℥30 h. s. Ordered nourishing food.

6th.—Has been restless during the night, and the discharge from the wound is thin and scanty. Pulse 112; bowels constipated.

℥30 of Liquor Sedativus and three Aloetic pills were administered.

Mr. Liston stated, that in consequence of the cerebral symptoms, and the constant and severe pain of the back and loins, the patient's chance of recovery would be very much diminished were amputation performed.

9th.—The discharge is more profuse, and the wound looks well; but he still complains of pain in the back. Bowels regular.

Habeat Vini ℥xii.

10th.—Has been delirious during the night; the discharge from the wound has increased, and is of a gleet appearance; pulse 120, bowels constipated, thirst, severe pain of back.

Injiciatur Enema commune vespere.

Habeat Vini ℥xvi.

12th.—The delirium has somewhat subsided, but he is still incoherent; bowels moved, pulse 110.

Cont. Vin. et Med.

13th.—Has rested well, and appears more composed; the pus is of a more healthy character, but has much increased in quantity; several small fragments of bone have been discharged; bowels regular, pulse 108, skin cool, less thirst.

Cont. Vin. et Med.

14th.—Has had several liquid dark-colored stools.

Habeat statim Opii gr. ij. et rep. vespere si opus sit.

15th.—The diarrhoea continues, the wound has assumed a more unhealthy aspect, and the pain of the back is undiminished.

Habeat Vini ℥xii. et cont. Med.

16th.—Is incoherent, but the diarrhoea has abated. There is slight discoloration around the wound, and a small vesicle over the internal malleolus, with considerable edema of leg; much thirst, tongue dry and furred; pulse 112, soft, and feeble.

Cont. Opium et Injec. Enema c. Tr. Opii 3i.

17th.—Has slept little; the discharge from the wound is very copious and fetid, resembling serum mixed with blood and synovia; pulse 120, diarrhoea, skin cold, countenance exsanguine.

Cont. Vin. et Op.

18th.—The discoloration of the ankle extended rapidly during the night, he fell into a state of low muttering delirium, and died this morning at 6 A.M.

Inspection.—There was no appearance of reparation in the ankle joint. The internal malleolus was found detached, and an abscess extended among the muscles to the middle of the leg. Over the upper and posterior part of the sacrum there was a small aperture, evidently recent, from which pus escaped on pressure; and, on dividing the integuments, an extensive abscess was found, occupying the soft parts over the sacrum and lower lumbar vertebræ, and communicating with another large abscess within the pelvis, and situated in the concavity of the sacrum. A longitudinal fracture extended through the centre of the sacrum.

Lithotomy.

Alexander Darling, æt 6, admitted under the care of Mr. Liston, Oct. 13.

Has had symptoms of stone since infancy.

At the age of 18 months his urine frequently stopped while flowing in a full stream; a sound was at this time introduced, but no stone was discovered. His urine has since been frequently bloody.

He complains of pain at the extremity of the penis, and great difficulty in making water; and is in the habit of frequently pulling forwards the prepuce. On the introduction of the sound, a calculus is distinctly felt. In the evening his bowels were freely opened by castor oil.

On the 14th he was laid on the operating table, but, in consequence of his violent cries and struggles, the stone could not be distinctly felt or heard by the surgeon, and the patient was put to bed.

16th.—He was to-day sounded privately in the ward, and the impulse of the sound on a stone was distinct. He was immediately carried into the theatre, the lateral operation of lithotomy was performed, and a mulberry calculus of the size of a horse bean was readily extracted with the scoop. A gum elastic tube was placed in the wound.

17th.—Has rested well; pulse 100; no untoward symptom; the urine passes copiously through the tube; bowels-constipated.

Sumat Ol. Ricini 3ij. vespere.

18th.—To-day the tube was withdrawn, and on introducing a straight sound from the wound, the bladder has been ascertained to be free of calculous fragments.

19th.—The urine passes partially per urethram.

Nov. 3.—Almost the whole urine passes naturally; the greater part of the wound has united, and the patient is in perfect health.

ST. GEORGE'S HOSPITAL.

Acute and Chronic Peritonitis.

THE following cases will not, we hope, be devoid of interest. They differ very widely from each other, but such difference is of comparatively little consequence in a report of isolated cases, each of which offers a good sample of the characters of the class of affections to which it belongs.

CASE I. *Fever—Perforation of the Small Intestines—Sudden Peritonitis—Death.*

William Stokes, æt. 24, a stableman, admitted Dec. 16, 1829, under the care of Dr. Hewett.

Present symptoms are, cough, expectoration of "thick matter, with some blood;" pain all up the sternum on inspiration, which is imperfect; breathing hurried; giddiness, head-ache, slight deafness, disposition to vomit; no sleep for three nights; pulse very small and rapid, skin warm, tongue loaded, bowels purged.

Has been ill for six days; was first attacked with cough and pain in the front of the chest. He attributes his complaint to sleeping in a damp bed.

Dr. Hewett, from the foregoing symptoms and history, considered the case to be one of fever, with a disposition to thoracic implication. He prescribed:—

Hydrarg. Submur. Pulv. Antim. aa gr. ij.
Ext. Papav. gr. iij. M 6tis. hor. sum.

Ol. Ricini 3ij. cras. prim. man. nisi prius, &c.

H. Sal. Effervesc. 6tis. hor.

Cuc. Cruent inter scap. ad 3vij.

Next day the pulse was 104, unequal, and easily compressed, the skin warm and perspiring, the tongue red at the sides and tip, but furred elsewhere, the abdomen neither tense nor tender. The chest was freely expansive, without cough, but the patient complained of a sense of tightness in it, and the spitting-pot contained about an ounce and a half of greyish mucous sputa. There was hoarseness, and the uvula and soft palate were slightly red.

16 Leeches were applied to the chest, and followed by an ample blister.

18th.—Pulse 120, skin warm and moist, tongue dryish and red at the tip, bowels open twice since daylight, "tightness" at chest removed by leeches; sputa mucous, and slightly blood-stained; cough troublesome; complains of ardor urinæ.

Rep. Pil. om. nocte tantummodò. Omitt. haust. salin.

R. Mist. Amygdal. 3xj. Liq. Potass. ℥xv.
Vin. Ipec. ʒj. M. 3tis. hor. sum.

On the 19th he was seen by Dr. Hewett, and found to be laboring under gonorrhœa præputialis, which he said he had contracted on the 12th, two days after his illness commenced! At 3 p. m. he was seen by Mr. Peam, and no material alteration in the symptoms was discovered. At half past 4, p. m. we saw him, and found him in the following condition:—

Delirious, restless, anxious; pulse about 120; small; skin warm, cheeks suffused with a hectic flush, tongue dryish and red; bowels, according to his own report, purged. The cough was not very troublesome; inspiration attended with pain in the abdomen, which was now extensively tender on pressure, but free from any tympanitis or tension. After this time he rapidly sank, vomited "coffee-ground" matters during the night, and died between 5 and 6 o'clock next morning.

Sectio Cadaveris.—Body not greatly emaciated; muscles still firm, and in good condition.

Thorax.—Universal, but old, adhesions of the pleuræ on both sides, particularly firm upon the left. Right lung quite free from tubercles, and crepitating, though not so well as it should do, in the upper lobes. Lower lobe gorged with blood, not crepitating well, and presenting an appearance of numerous extravasations of blood into its texture. These portions of lung are not, however, so firm and granular as ordinary "pulmonary apoplexy;" they swim in water.

Left lung also free from tubercles; rather gorged with blood in its inferior lobe, but presenting no appearance of extravasation. Mucous membrane of trachea and bronchi congested, and of dull red colour. Heart, &c. sound.

Abdomen.—General inflammation of the peritoneum, considerable effusion of dirty-looking sero-purulent matter into its cavity; some slight extravasation of fecal matter.

On opening the intestines, an oval patch of ulceration found in the ileum, about a foot and a half from the cæcum. The ulcer has destroyed the mucous and submucous coats, and in its centre is a small pea-shaped perforation of all the coats, through which the effusion of fecal matter has evidently taken place. External surface of the intestine at this part covered with a layer of recent lymph, which is deficient at the aperture itself. In the neighbourhood of this perforation are two or three small ulcerations of the mucous membrane, without any increased vascularity at their edges. The ileum, for the extent of about three inches from the cæcal valve, is in a sloughy state, with much ulceration, in patches, of its mucous membrane.

Mucous membrane of the large intestines, from the ileo-cæcal valve to the commencement of the transverse arch of the colon, much congested, and of deep claret color; no ulcerations.

Several of the mesenteric glands in a state of ulceration and suppuration in their interior.

It is quite clear that the perforation of the intestine, in this case, must have taken place between the hours of 3 p.m. of the 19th, and half-past 4 p.m. When visited at the former time, by Mr. Peam, there were no symptoms whatever of peritonitis, but when we saw him at the latter they were unequivocally established. In an interesting clinical lecture on the case, by Dr. Hewett, that physician illustrated this point by some well-marked cases which had occurred to him. In one, the perforation took place—that is, the symptoms of peritonitis suddenly occurred—during his visit to the patient; and in another the time was also accurately ascertained. Dr. Hewett likewise remarked on the very mistaken notion, that active depletion is necessary, or justifiable, in such cases. In the reduced state into which such patients are sunk, the

free use of phlebotomy would only accelerate the fatal event, and place the practitioner's character in jeopardy in the eyes of the relatives—and what is worse, of the well-informed members of the profession.

CASE II.—*Chronic Inflammation and Tuberculation of the Peritoneum.—Tubercular Accretions on the Pleuræ.*

Martha Hawkey, about 45 years of age, admitted Dec. 23, 1829, under the care of Dr. Seymour. The following is the report on the 24th.

Complains that soon after taking her food she experiences a feeling of uneasiness in the region of the stomach, which is followed by vomiting of the ingesta, and occasionally of dark coloured matters, mixed with bile. Abdomen much enlarged, without any distinct tumor, but a sensation communicated to the finger as if the intestines were glued together into a mass; no local pain; pulsation of the aorta to be felt all over the abdomen. Pulse 84, not strong; tongue clean.

Vomiting commenced about two months ago, after a severe attack of pain in the bowels, attributed to the passage of gall-stones. She has had some cough; has been leeches on the epigastrium, and cupped over the cæcum and liver. She has been in the habit of drinking spirits. Was ordered, last evening, some calomel and Dover's powder, by Mr. Hutchins, with haustus sennæ this morning.

R Acid. Hydrocyan, Medic. gtt. ij. Mist. Amygdal. ʒiiss. t. d.

The patient was so much worse in the evening that the draught was discontinued, and an effervescent mixture with ammonia and spiritus ammoniæ aromaticus ordered in its stead every three hours. She vomited at intervals some dark coloured fluid, and on the 25th was evidently sinking. Brandy, &c. was given, but she died in the course of the next day.

Sectio Cadaveris, 2 p.m. 27th.—Body not deficient in *en-bon-point*; belly still very tumid.

Abdomen—Some little fluid in this cavity. Liver, stomach, and intestines, all glued together, and exhibiting almost the same color—namely, a spotted purple. The peritoneum lining the viscera, and the walls of the abdomen, almost universally thickened and tuberculated. There were, however, no distinct or prominent tubercular accretions, but rather little nodules in the thickened serous membrane, making it feel unequal and rough to the finger, when passed over its internal or external surface. Omentum knotted up into an irregular, purplish lump; small intestines forming a kind of unequal ball in the middle of the belly.

Coats of the stomach, like those of the intestines, much thickened, and its mucous

membrane greatly corrugated. No scirrhus or medullary disease. Liver internally pale and soapy. Kidneys and pancreas tolerably healthy. Gall-bladder extremely diminutive.

Thorax.—A little fluid in the left side of the chest. Pleuræ studded with small whitish accretions, looking like minate portions of wax dropped whilst hot upon the membrane, and suddenly cooled upon it. Pleuræ themselves not thickened. Lungs pretty healthy, except in their inferior parts, where they were slightly hepatized.

Pericardium free from accretions, except where covered by the pleuræ; heart not diseased. The convex side of the ascending arch of the aorta a little dilated, but free from depositions in the coats. Near the bifurcation of the aorta into the iliacs, a considerable patch of bony matter in the vessel, with some contraction of its calibre.

Cranium not examined.

DEATH OF SIR THOMAS LAWRENCE.

As so many contradictory reports have been circulated with regard to the fatal illness of the late highly-gifted President of the Royal Academy, it may be interesting to our readers to be made acquainted with the real circumstances which attended it. Our information is derived from a source which enables us to speak confidently of its accuracy.

Sir Thomas Lawrence had been indisposed for some time, but not to such an extent as to prevent him from dining out, and otherwise entering into society. During the night of Wednesday (the 6th), however, he was taken alarmingly ill, and Dr. Holland was sent for at three o'clock on Thursday morning. He then complained of acute pain in the chest, in a line on the level of the sternum, but not extending to the arms. The breathing was laborious, and could only be performed in an erect posture; the pulse was imperceptible at the wrist; and the action of the heart itself was so weak, as scarcely to be felt on applying the hand externally—its pulsations equalled 130 in the minute.

He was bled to fifteen ounces with considerable relief to the pain, and such decided mitigation of the symptoms, that he called for the repetition of the operation a few hours after, on some threatening of a relapse. The pulse returned after the venesection, so as to be felt at the wrist; but this did not

long continue. The blood was dark, with a firm coagulum, and a thick buffy coat.

In the course of Thursday he was so much better as to see some of his friends, two of whom were with him in the evening at the time the fatal attack came on. This consisted in a return, with increased intensity, of the symptoms above mentioned, on his making some slight exertion: the heart was unable to recover its power of acting, and he expired within half an hour, and before the arrival of his medical attendant.

The body was examined by Mr. Green, who, it will be remembered, is Professor of Anatomy to the Royal Academy; and the morbid appearances, as might have been expected from the previous history, were chiefly found in the heart. This organ was somewhat enlarged in size, and its muscular substance unusually dense; all the valves were more or less diseased, particularly those of the left side, where they were considerably thickened with ossification; a bony ridge running along the attachment of the semilunar valves to the aorta. The arch of this vessel was much diseased, having numerous patches of incipient ossification. The coronary arteries, however, were sound. About a pint of serous fluid was found in the cavity of the chest, and there were some adhesions between the two pleuræ. The other parts of the body were generally healthy.

BOOKS RECEIVED FOR REVIEW.

Commentaries on the Use and Necessity of Lavements. By James Scott, Surgeon.

The Annual Biography and Obituary—1850.

Some Observations respecting the Management of the Pauper Lunatic Asylum at Wakefield. By C. Crowther, M.D.

The Veterinarian, for January.

ERRATUM.

In Dr. Macleod's letter in our last number but one, page 444, for "with the intention of passing of him again," read "with the intention of passing him again."

W. WILSON, Printer, 37, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JANUARY 23, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XVII.

Secondary Hæmorrhage—Union by the Second Intention — Lacerated; Contused; Punctured; and Gun-Shot Wounds—Question of Immediate or Delayed Amputation.

I spoke to you, gentlemen, in my last lecture of the occurrence of bleeding in wounds, and the conduct that is to be pursued when hæmorrhage takes place. I also adverted to the circumstance of the occurrence of hæmorrhage after a wound has been dressed at some distance of time from the infliction of the wound—secondary hæmorrhage. I believe I omitted to state what should be done when hæmorrhage comes in this way. It is necessary to open the wound, to remove the coagulated blood, if any such has formed in it, and to secure the bleeding vessels. The removal of the coagula, and the exposure of the surface of the wound, will of themselves very commonly be sufficient to stop bleeding of this kind. In dressing a wound, if there is any bleeding, even of a slight kind, or if you suspect that this may occur afterwards, it is well not to unite the wound very closely, but to leave intervals between the strips of adhesive plaister, so that in the event of hæmorrhage taking place, the blood may make its way out at the sides. Thus you are often saved the trouble of opening the wound, and thus the patient may be saved the pain which is inseparable from doing so.

I spoke to you in my last lecture of the union of wounds by adhesion, or what is called union by the first intention. If the efforts which you make to procure union in this way should fail, then the object must be accomplished by the process of granulation and cicatrization, which I have already described, and which constitutes what is desig-

minated technically healing by the *second intention*.

The surface of a wound, if it have not been brought together, or if there have been loss of substance, so that the edges cannot be approximated, assumes a whitish, or yellow appearance, and has more or less of a dry aspect. Within a short time the surface begins to suppurate; discharge takes place from the wound; granulations are formed upon the surface; then the part cicatrizes; and, in fact, it goes through the process that I have described to you in speaking of abscess. The changes which the wound undergoes have been noted by old writers in surgery, who have given them names to express the various stages of the process, although they are different from the names that we at present employ. They say that every wound must go through different stages: *digestion*, that is, the formation of matter—the discharge which takes place in the wound; *incarnation*, that is, granulation, the formation of new flesh, and *cicatrization*, or closing. These are the terms employed by the old writers; and they express very accurately the stages that a wound passes through when it is to be healed by the second intention.

In *lacerated* wounds the soft parts of the body are divided by tearing them forcibly asunder, instead of by cutting; and the surface of the wound very commonly is still further injured by being bruised. The inflammation excited corresponds to the degree of injury that has been inflicted. Thus when any part of the body is lacerated and bruised, a much higher degree of inflammation is produced in the wounded part than that which results in consequence of a simple incision. The inflammation, under such circumstances, goes beyond the point which is necessary for adhesion or union by the first intention. Such wounds do not unite by adhesion; the inflammation is too considerable. The cure of these injuries takes place by granulation and cicatrization, or by the second intention. In fact, the degree of

action excited in the part that has suffered this kind of injury is often so considerable that it sloughs or perishes. It is to no purpose to bring together very accurately the sides of a wound of this description, because they will not unite if you do. It is well, however, just slightly and gently to approximate them; then to cover the wounded part with a damp cloth, or soft poultice, and afterwards to wait the formation of granulations and cicatrization.

If the wound be of considerable extent, the local inflammation, and consequent febrile disturbance of the system, may very likely require active antiphlogistic treatment. You may have occasion to take blood locally or generally, and to employ aperient medicines, which, in conjunction with rest of the part, comprises all that you require in most of such cases.—A man was brought into this hospital, and came under my care. He had been driving a coal-waggon, and got drunk, in which state he fell, with one leg just in front of the wheel. The wheel caught the leg and tendons of the thigh; it did not go over the limb, but shoved it on before, along the ground. He was brought to this hospital with a wound about five inches in length at the lower part of the thigh, above the patella, and about three inches in breadth, detaching the integuments, the cellular membrane, and nearly the whole of the extensor muscles of the knee-joint. In consequence of the limb being grated along the ground by the waggon, the surface of the wound had the dark color of mud; the lower part had a gravelly appearance. It appeared as though the knee-joint was laid open; and on examination it proved that the capsular membrane was exposed, but not divided. Now in this case the limb was placed in a straight position, and splints were applied along the sides. It was cleansed from the mud and gravel that covered the surface, and a soft poultice was applied to it. In the course of the evening, the patient's pulse having risen, twenty-four ounces of blood were taken from the arm, and he was freely purged. Next day he was bled to the extent of sixteen ounces, and the purgative medicines repeated, and he was put upon low diet. On the following day sixteen ounces of blood were taken; and this treatment prevented the occurrence of local inflammation or general fever; and, in fact, no further action took place in the part than was just sufficient to accomplish the purpose of healing it. The surface of the wound cleaned, and a superficial slough took place: it then granulated, and healed favorably. The curative process occupied about two months. Thus this very serious injury was healed without any great local suffering to the patient, and without considerable fever or disorder of the system.

In the injury which we call *bruise* or *con-*

tusion, considerable force is applied to the soft parts of the body. The cohesion of the parts is lessened; the structure is considerably affected without its being actually divided; and frequently, in conjunction with this effect, there is an effusion of blood into the interstices of the part;—this, however, is not absolutely necessary. Such is the kind of wound which constitutes bruise or contusion. The effect of this injury is to interfere materially with the function which the part should execute. Thus when the muscles are bruised, the motions which they have to perform either cannot be executed at all, or are executed, very imperfectly, and with pain. If a bruise take place in a joint, considerable pain and stiffness of the part is produced. Here the limb must be kept quiet. If there be considerable pain produced, blood must be taken from the part by the application of leeches, and the usual means which are calculated to prevent the occurrence of inflammation, must be employed. The treatment must be of an antiphlogistic character, proportioned to the severity of the symptoms that are present. When muscles are bruised, it is of particular importance that the injured parts should be kept at rest, that is, that the muscles should not be exerted for a considerable length of time, in order that they may recover their power.

The effusion of blood in consequence of a bruise is technically called *ecchymosis*, and it may take place either in the interstices of the part, so as to be diffused throughout the textures generally, or it may be collected together at one point. In cases of diffused ecchymosis, the blood gradually tinges the textures of the part with which it is in contact, and produces those changes of color which are familiarly known by the appellation of black and blue marks consequent on bruising. These black and blue marks are not produced immediately; they do not follow the blow or injury directly, but seem to be the gradually tinging of the part by the coloring matter of the blood. When the effusion has taken place into the textures beneath the skin, the external surface of the bruise becomes dark, livid, brown, or reddish; and the change of color which is thus produced often extends to a considerable distance from the part which has been immediately injured. The blood which is thus effused is removed by the absorbents; and perhaps there are no applications which we can make use of that will very much accelerate the natural process of absorption. The blood will be removed by the absorbents if no applications at all are employed. Some substances, however, of the *materia medica* have been considered to possess the power of accelerating the process. They have been called *discutients*. The muriate of ammonia, in the form of solution, has been

considered to have this power. Where the object is to accelerate the absorption of blood, stimulating substances have been employed, such as those that contain ammonia, and various stimulating liniments are considered to have the power of assisting in this process. When the blood is effused in one spot, if the limb or part in which it has taken place be kept perfectly quiet, the effusion in like manner may be removed by the absorbents. But it happens not uncommonly that the effusion of blood in that way excites inflammation in the part in which it is effused; and, in fact, the symptoms in the part will be very like those attendant on the formation of an abscess. You make an opening, and you find, that instead of letting out a quantity of matter, you merely evacuate a large coagulum of blood. This kind of process takes place where there is a large quantity of loose cellular membrane in the textures of a part, such as in the scrotum of the male and the labia pudendæ of the female. In the latter case considerable swelling takes place from the bursting of a vessel, and there is an effusion of blood, in one mass or collection. When this happens; when pain and heat come on in the part, and there are induration and inflammation consequent on such, you must make an opening in the integuments, evacuate the effused blood, and apply cold afterwards. The cavity will contract, and the case will generally do very well.

Punctured wounds are those which are inflicted by sharp instruments that are pointed and narrow in shape, so as to enter the part readily, and penetrate easily to a considerable depth; in fact, the depth of such wounds is uncertain. You cannot well tell how far a sharp instrument may pass into the substance of the limb or body. The danger of such wounds is by no means according to their external appearance. You may have a small division of the integuments, and yet the pointed instrument by which it has been effected may have gone very deep into the limb, and injured parts of considerable consequence. As these wounds do not in the first instance put on a formidable appearance, patients are apt to continue the use of the limb: they go on with their ordinary exercise, and bring on inflammation in the parts that have been wounded. When inflammation occurs in consequence of a wound of this kind, it affects the deep-seated textures. Hence the limb generally swells, and becomes hard, the inflamed parts being bound down and confined by the fascia that covers them. The appearance that the limb then exhibits is often ascribed to inflammation or injury of the fascia. When there is a considerable swelling and hardness, the fascia is said to be affected—the case is held to be inflammation of the fascia. Now the truth is, the fascia is one of those textures that is little liable to inflammation. Inflam-

mation of the fascia is a very rare occurrence; and the appearance of inflammation, when it comes on in punctured wounds, is not to be ascribed to that texture, for it is seated in the deeper parts of the limb, and these are bound down by the fascia.

It is necessary, therefore, in the treatment of wounds of this kind to adopt those precautions in the first instance that are calculated to prevent the occurrence of inflammation. Although you do not know the actual extent of the wound, you can treat the case as if it were likely that considerable inflammation might occur, and you then prevent those unpleasant consequences that are apt to follow from punctured wounds. If cases of this kind be neglected, the local inflammation is often very considerable.

Gun-shot wounds have very commonly been considered as altogether different from wounds of other kinds, and as being very peculiar in their nature. The injury which is inflicted by wounds of this kind is very considerable; the inflammation which they produce in the part is very violent; and their consequences altogether become very serious. Hence, when the employment of fire-arms was first introduced, the effects of these wounds were found so much more serious than those that had been ordinarily observed from the use of the weapons that previously existed, that it was supposed something poisonous belonged to the nature of gun-shot wounds; it was thought the gun-powder affected the wounds, or that the heat of the ball did so. It was supposed that some deleterious effect was exerted on the wound in this way; and an attempt was made to counteract this influence by those kinds of application that were supposed to be capable of removing it. Hot dressings, such as turpentine, warm oils, and various stimulating and powerful means, were employed for the purpose of counteracting this supposed poisonous nature of gun-shot wounds.

The wars of modern times have afforded ample opportunity to the military surgeons of Europe of observing gun-shot wounds and ascertaining their nature; so that that part of the subject, and the practical rules of application, are now well understood. The only peculiarity in gun-shot wounds arises from the nature of the substance by which the wounds are inflicted, and the degree of force with which this is applied to the textures of the human body.

The bodies by which these wounds are inflicted, are balls, bullets, fragments of shells, splinters of stone and wood, and various hard substances of that kind. These are driven with great force against the body, and they produce lacerated and contused wounds of the most serious kind. The degree of violence with which these wounds are inflicted, varies in different in-

stances. If a gun-shot projectile meet the body in full force, and in a straight direction— if it be small, it traverses the part, or if it be large, it carries it away. If a smaller substance meet the body directly, with a less degree of force, it will tear and lacerate the part, or break and splinter the bones. It will produce injuries of these different kinds according to the degree of force with which it is impelled. Sometimes bullets or balls strike the body obliquely, and then generally they do not enter the part, but glance off. Under such circumstances, the soft textures that intervene between the skin and the bone, may be torn and bruised, effusion of blood may take place, and the bone itself may be broken without the skin being injured. It often happens in battle that persons are found dead in the field in whom there is no appearance of wound to account for the occurrence; but if the bodies were accurately examined, some injury, such as that I have now mentioned, would be found to have taken place. The death of these persons has been ascribed to the "wind" of the ball. It has been supposed that the ball has not actually struck the body, but in consequence of passing near it, some kind of influence has been produced. Thus, the occurrence of death has been vaguely ascribed to the wind of a cannon-ball. This opinion rests on no foundation whatever. We have no reason to suppose that the mere passage of a cannon-ball in full force, however near it may go to the body, is capable of doing injury. In fact, if a person have his thigh shot off by a cannon-ball, and in consequence of which it is obvious the ball must necessarily have gone near the other thigh, yet that is not injured by it. There can be no doubt that death arises from these projectiles striking the body obliquely, and then flying off. We see in cases of accident, that internal parts may be bruised and bones broken, though the skin is not injured. The mere absence of injury of the skin, is no proof that considerable violence has not been offered to the parts within.

With respect to the symptoms of gun-shot wounds, sometimes the immediate occurrence of the accident is not denoted by any sign; that is, the patient is not conscious that a wound has been received, more particularly if the mind should be actively engaged at the time that the accident occurs, as in the instance of a person in battle, when the leg and thigh may be shot off, and he not be aware of it till he finds it out by accident. Very often serious injury of another kind takes place without the limb being shot off, and the patient finds the blood running from some part, by which he first becomes aware of his being wounded. In other instances, severe pain is produced by the infliction of a gun-shot wound. Sometimes serious and even fatal hæmorrhage is

produced at the moment by these injuries: indeed, you will easily understand that large vessels may be injured by wounds of this kind, and you will not be surprised that a copious effusion of blood should take place, and that a person may perish from the bleeding. But in the majority of instances, gun-shot wounds do not bleed at all, or they bleed in a slight degree; and when a limb is carried away by a cannon-ball—a thigh, for instance, no considerable hæmorrhage takes place. When an artery is divided by actually tearing the coats of the vessel, it does not give way all at once, or in an equal degree; the internal coat does not allow of so much stretching as the external or cellular coat;—if the external coat be drawn out, it contracts again, and becomes a kind of ligature round the divided internal and middle coats. Thus, if you take an artery out of a limb after a wound of this kind, you find the orifice of the vessel is covered up by a sort of dense superstratum, consisting of the contracted cellular coat of the artery; and in this way it happens, that when large arteries are torn, being first extended, and then divided, they do not bleed, although if a projectile goes through them, without dividing them, hæmorrhage does very frequently take place.

The occurrence of a severe gun-shot wound produces a peculiar effect both on the nervous and circulating systems. It will cause fainting, tremulous agitation, alarm, and feelings of anxiety in some individuals, that will disturb the action of the heart, lowering it very much, and producing a feeble and irregular pulse, paleness, coldness, shivering, or actual syncope. In this way it affects both the nervous and circulating systems, and the patient will seem on the point of dying. This condition will sometimes prevail for hours after the infliction of the wound, although in other instances, as I have already mentioned, the patients are hardly aware that a wound has taken place. These symptoms arise from a violent impression on the nervous and circulating systems, and may go off in two, three, or four hours after the wound has been received.

In considering the *treatment* of gun-shot wounds, we must observe that they are often very complicated, from the presence of foreign bodies; that is, the ball, which has produced the wound, may not have passed through the body; it may have entered and remained in the part, and portions of the dress of the individual may be carried in by the bullet at the time it strikes him. It is desirable to remove such foreign substances in the first instance, when it can be accomplished easily, as when the ball or any fragments of the dress are near the external opening of the wound; or if they can be removed by making a small incision, this should be done. If a bullet, for instance, having gone through

a limb, is just under the skin on the opposite side, and you can remove it by making an incision in the skin, you ought to take it out. If there is a large mass of clothing so situated that by an inconsiderable incision you can get it out of the wound, it is desirable to do so; for these substances will become the source of irritation in after stages of the wound. When, however, you cannot get rid of these foreign bodies without a tedious search for them, and without extensive incisions, you had better leave them alone. It often happens that bullets are introduced deep into the body, and not being found at the time the wound has been inflicted, they remain in the situation which they have reached in the first instance, and continue quiet, for many years, without exciting irritation in the part. It frequently happens that bullets, after they enter the body, have their direction changed;—they do not go straight through from one surface to another;—they do not penetrate in a straight course, but may be turned aside from their original direction, either by striking against a bone or even a muscle, and have the direction altered so much, that examining the external wound made by the ball on first entering the body, affords no means of tracing out the part at which it has ultimately arrived. In many cases you cannot find where the ball is situated, so that you have not the means of removing it from the body. For the reasons that I have already given, it is not worth while to make a tedious search for it, but under such circumstances it is better to leave it alone—as it often happens that no very serious effect is produced by its presence.

For the few first days after the infliction of such a wound, you cannot do better than keep it covered with a cold wet cloth; that is the most likely mode to prevent the occurrence of inflammation. If the cold should be uncomfortable to the feelings of the patient, you may apply a poultice to the part. You should adopt, in respect to the position of the limb, that in which it is most quiet and comfortable; while with regard to the state of the patient generally, his diet, and all other circumstance, those means which are most likely to prevent the occurrence of inflammation are to be put in force—for inflammation is the great source of danger in cases of this kind. Under certain circumstances, it may be necessary for you to adopt very active antiphlogistic measures; that is, where a part of great importance is the seat of injury, and where that injury is very considerable.

Such are the means that you should use in gun-shot wounds;—now there are certain proceedings which it will be expedient for you not to adopt. In the first place you are by no means to regard it as a general rule, that you should apply bandages in wounds of this description: you should

not apply bandages after a gun-shot wound unless there be some particular purpose to be answered by it. You may expect considerable inflammation and swelling of the part, and these circumstances render the application of bandages very objectionable. Heretofore it has been said that you should introduce portions of sponge, or lint, or some form of what surgeons used to call *tents*, into the orifice of the wound, to keep it open, and thus afford free discharge from the superficial aperture. This is not at all necessary. Again, it has been advised to make an incision at the entrance of the ball, to prevent the occurrence of tension—to prevent the confinement of matter, or discharge, when the period of discharge arrives. Generally speaking, this may be considered as unnecessary;—if you adopted the means best calculated to prevent the occurrence of inflammation, no tension will take place in the part, and consequently the incisions are without an object. If there should be any tension, or if the matter should be confined, it will then be time enough to make the incision required for evacuating it.

After a few days the surface of the wound will begin to discharge, and it generally sloughs. There is so much bruising in the case of gun-shot wounds, that the surface generally presents us with a slough more or less thick, and it easily separates from the whole track of the wound, and is discharged. This process takes place four or five days after the occurrence of the wound. Now this is a period of danger, in consequence of the occurrence in many instances of secondary hæmorrhage. As the track of a bullet sloughs, if it go near a vessel of consequence, such vessel may be included in the sloughing process; and when a number of vessels give way, you will expect free bleeding to take place. Thus it has been found that in instances where no hæmorrhage of consequence has occurred immediately after a wound, serious hæmorrhage has occasionally taken place at the time mentioned. This is a period at which the patient must be attentively watched; and in any case in which the track of the wound goes near vessels of consequence, every thing must be prepared in case hæmorrhage should take place, and you must instruct the attendants to pay attention to this point.

The healing of the wound is accomplished by the processes of granulation and cicatrization, that have been already described. If no blood-vessel of material consequence be injured, and if no bone have sustained considerable injury—although the bullet has taken a suspicious track—if you have adopted all the measures necessary to limit or prevent inflammation, you will find that the wound, however serious at first, will do well, and that nature will perform the restorative process. If a bone be in-

stances. If a gun-shot projectile meet the body in full force, and in a straight direction— if it be small, it traverses the part, or if it be large, it carries it away. If a smaller substance meet the body directly, with a less degree of force, it will tear and lacerate the part, or break and splinter the bones. It will produce injuries of these different kinds according to the degree of force with which it is impelled. Sometimes bullets or balls strike the body obliquely, and then generally they do not enter the part, but glance off. Under such circumstances, the soft textures that intervene between the skin and the bone, may be torn and bruised, effusion of blood may take place, and the bone itself may be broken without the skin being injured. It often happens in battle that persons are found dead in the field in whom there is no appearance of wound to account for the occurrence; but if the bodies were accurately examined, some injury, such as that I have now mentioned, would be found to have taken place. The death of these persons has been ascribed to the “wind” of the ball. It has been supposed that the ball has not actually struck the body, but in consequence of passing near it, some kind of influence has been produced. Thus, the occurrence of death has been vaguely ascribed to the wind of a cannon-ball. This opinion rests on no foundation whatever. We have no reason to suppose that the mere passage of a cannon-ball in full force, however near it may go to the body, is capable of doing injury. In fact, if a person have his thigh shot off by a cannon-ball, and in consequence of which it is obvious the ball must necessarily have gone near the other thigh, yet that is not injured by it. There can be no doubt that death arises from these projectiles striking the body obliquely, and then flying off. We see in cases of accident, that internal parts may be bruised and bones broken, though the skin is not injured. The mere absence of injury of the skin, is no proof that considerable violence has not been offered to the parts within.

With respect to the symptoms of gun-shot wounds, sometimes the immediate occurrence of the accident is not denoted by any sign; that is, the patient is not conscious that a wound has been received, more particularly if the mind should be actively engaged at the time that the accident occurs, as in the instance of a person in battle, when the leg and thigh may be shot off, and he not be aware of it till he finds it out by accident. Very often serious injury of another kind takes place without the limb being shot off, and the patient finds the blood running from some part, by which he first becomes aware of his being wounded. In other instances, severe pain is produced by the infliction of a gun-shot wound. Sometimes serious and even fatal hæmorrhage is

produced at the moment by these injuries: indeed, you will easily understand that large vessels may be injured by wounds of this kind, and you will not be surprised that a copious effusion of blood should take place, and that a person may perish from the bleeding. But in the majority of instances, gun-shot wounds do not bleed at all, or they bleed in a slight degree; and when a limb is carried away by a cannon-ball—a thigh, for instance, no considerable hæmorrhage takes place. When an artery is divided by actually tearing the coats of the vessel, it does not give way all at once, or in an equal degree; the internal coat does not allow of so much stretching as the external or cellular coat;—if the external coat be drawn out, it contracts again, and becomes a kind of ligature round the divided internal and middle coats. Thus, if you take an artery out of a limb after a wound of this kind, you find the orifice of the vessel is covered up by a sort of dense superstratum, consisting of the contracted cellular coat of the artery; and in this way it happens, that when large arteries are torn, being first extended, and then divided, they do not bleed, although if a projectile goes through them, without dividing them, hæmorrhage does very frequently take place.

The occurrence of a severe gun-shot wound produces a peculiar effect both on the nervous and circulating systems. It will cause fainting, tremulous agitation, alarm, and feelings of anxiety in some individuals, that will disturb the action of the heart, lowering it very much, and producing a feeble and irregular pulse, paleness, coldness, shivering, or actual syncope. In this way it affects both the nervous and circulating systems, and the patient will seem on the point of dying. This condition will sometimes prevail for hours after the infliction of the wound, although in other instances, as I have already mentioned, the patients are hardly aware that a wound has taken place. These symptoms arise from a violent impression on the nervous and circulating systems, and may go off in two, three, or four hours after the wound has been received.

In considering the *treatment* of gun-shot wounds, we must observe that they are often very complicated, from the presence of foreign bodies; that is, the ball, which has produced the wound, may not have passed through the body; it may have entered and remained in the part, and portions of the dress of the individual may be carried in by the bullet at the time it strikes him. It is desirable to remove such foreign substances in the first instance, when it can be accomplished easily, as when the ball or any fragments of the dress are near the external opening of the wound; or if they can be removed by making a small incision, this should be done. If a bullet, for instance, having gone through

a limb, is just under the skin on the opposite side, and you can remove it by making an incision in the skin, you ought to take it out. If there is a large mass of clothing so situated that by an inconsiderable incision you can get it out of the wound, it is desirable to do so; for these substances will become the source of irritation in after stages of the wound. When, however, you cannot get rid of these foreign bodies without a tedious search for them, and without extensive incisions, you had better leave them alone. It often happens that bullets are introduced deep into the body, and not being found at the time the wound has been inflicted, they remain in the situation which they have reached in the first instance, and continue quiet, for many years, without exciting irritation in the part. It frequently happens that bullets, after they enter the body, have their direction changed;—they do not go straight through from one surface to another;—they do not penetrate in a straight course, but may be turned aside from their original direction, either by striking against a bone or even a muscle, and have the direction altered so much, that examining the external wound made by the ball on first entering the body, affords no means of tracing out the part at which it has ultimately arrived. In many cases you cannot find where the ball is situated, so that you have not the means of removing it from the body. For the reasons that I have already given, it is not worth while to make a tedious search for it, but under such circumstances it is better to leave it alone—as it often happens that no very serious effect is produced by its presence.

For the few first days after the infliction of such a wound, you cannot do better than keep it covered with a cold wet cloth; that is the most likely mode to prevent the occurrence of inflammation. If the cold should be uncomfortable to the feelings of the patient, you may apply a poultice to the part. You should adopt, in respect to the position of the limb, that in which it is most quiet and comfortable; while with regard to the state of the patient generally, his diet, and all other circumstance, those means which are most likely to prevent the occurrence of inflammation are to be put in force—for inflammation is the great source of danger in cases of this kind. Under certain circumstances, it may be necessary for you to adopt very active antiphlogistic measures; that is, where a part of great importance is the seat of injury, and where that injury is very considerable.

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jured, it will often happen that the wound, instead of uniting, will remain fistulous, and portions of the bone will come away for a long time. The patient may suffer for a considerable period in this way, without being in any kind of danger.

In cases of serious gun-shot wounds of the extremities, it often becomes a question whether it would be better to attempt to save the limb, or to perform the operation of amputation. In certain cases of this kind the injury is so extensive, and so violent in degree, that you have no hesitation in deciding the point. Traumatic gangrene would occur, or so violent a degree of local inflammation, and fever consequent upon it, as inevitably to destroy the life of the patient. But the case may be rather more doubtful—it is possible that the limb may be saved, yet there is much risk that by making the attempt the patient may lose his life; or, after serious inflammation, suppuration, and a large formation of matter, he may recover at the end of several weeks, months, or even years, with a limb so much impaired in motion, that it is doubtful whether a wooden leg would not be more useful to him. There can be no hesitation then in saying, that there are certain cases of gun-shot wounds in which the removal of a limb is the best course of proceeding for the patient, though I must observe that this point often has been questioned. Frederick the Great of Prussia, had much occasion for the assistance of soldiers, and because he saw many individuals who had lost a limb, and who were thereby rendered incapable of serving him, he took it into his head that the surgeons cut off a limb when it was not necessary, and he determined to see if amputation could not be avoided. He directed the chief surgeon, Bilguer, to try the experiment, and he published a Tract, the object of which was to prove that amputations under such circumstances might be dispensed with. The work is entitled *Dissertatio de Membrorum Amputatione, rarissime Administranda, aut quasi Abroganda*. The arguments he made use of to shew that amputations should not be performed, are answered by Mr. Pott, in his surgical works.

We can have no hesitation in saying that there are cases in which amputation is necessary. The question then will occur, what are the kinds of cases of gun-shot wounds of limbs that require their amputation? What is the time at which the operations may be most advantageously performed? The cases requiring amputation are when an important joint is traversed by a bullet. A gun-shot wound of this kind of the knee is always a case for amputation; and army surgeons consider, in most instances, a similar kind of injury of the elbow, or of the ankle, as also requiring amputation—at all events of the ankle.

With respect to the elbow, the power of restoration is more considerable, and a stiff joint there is not of so much consequence. However, in most cases of accidents of this kind involving the elbow or ankle, it is considered by those who have had much experience in this way, to be proper to amputate. A very considerable laceration of the soft parts of a limb, with splintered and extensive fractures of the bone, and a compound fracture of the thigh by a gun-shot, is always fit for amputation. If the soft parts be very extensively lacerated and torn, and the bone be considerably injured and splintered, it is also a proper case for amputation. It will often happen with cases of this kind, that the splinter of the bone will be found above where the projectile strikes the limb. When a large mass of the soft parts of the limb is shot away, more particularly if the main artery be injured; and when a limb is carried away entirely by a cannon-ball, amputation must take place. It may seem in the latter instance that the accident has performed the amputation; the amputation, however, is not done scientifically enough for our purpose, but renders it necessary to cut off the limb higher up. These are the principal cases of gun-shot wounds of the extremities in which the removal of the limb becomes necessary.

Then with respect to the *time of performing* the operation. You have the choice between immediate or rather early amputation—that is, the removal of the limb within ten, or say twenty-four hours at the outside from the occurrence of the accident—when inflammation has not arisen in the part, and when febrile disturbance of the system has not taken place;—or after the local inflammation and general febrile disturbance shall have subsided—that is, a considerably remote period of time from the occurrence of the accident. The choice is between immediate or early, and delayed—between primary and secondary amputation. Now the question, which of these two periods is best for the removal of the limb, must of course be a matter of experience. This is not a point that is to be determined by reasoning, *a priori*, but by observation. You must observe what actually takes place in a considerable number of instances, and compare the results of a large number of cases in which the limb has been removed immediately after the accident, with a like number of cases where the operation has been deferred to the period when the local inflammation and general fever have subsided, and see by which plan the greatest number of lives are saved. Now the result of experience is quite decisive, and it proves clearly that *early* amputation is the best; and, in my opinion, the result of experience in this respect corresponds with the dictates of reason. If we were to

rely merely on reasoning, I think we should arrive at the same conclusion that experience points out. What is the reason why you determine on removing a limb under such circumstances? Because you think the nature of the accident is such as to endanger the life of the individual. Reason would teach you not to remove the limb, unless you supposed the life to be endangered. The life may be endangered by traumatic gangrene, by local inflammation, and by febrile disturbance of the system. Now if you defer the operation of amputation till a remote period, you give the patient a chance of dying before the time of amputation arrives: by immediate amputation you save the patient all the risk of traumatic gangrene, of violent local inflammation, and of the febrile disturbance of the system. By delay you expose the patient to all these consequences, and he may not live till the second period arrives. As a reason for delaying amputation, it has been said that patients in strong health do not bear operations so well as patients that have been reduced. This, as a general proposition, may be admitted to be true; but that is not the question in this case. The question is, whether out of an equal number of patients on whom amputation is performed in consequence of serious gun-shot wounds, you save the greatest proportion of those on whom you operate immediately after the injury has taken place, or of those on whom the operation is deferred to a remote period? Whether the patient will go through the amputation better immediately after the occurrence of the injury, or whether he will go through it better after he has gone through the inflammation and fever consequent on and resulting from the injury? that is the question. Now if we attend to what has taken place in instances where a large number of amputations have been performed under both these circumstances, we shall find that the result is decidedly in favor of early amputation. After the battles of Toulouse, New Orleans, and some others that occurred towards the termination of the last campaign, this comparison was carefully made, and the results of all the amputations that were performed immediately on the field of battle, or within a short time of the occurrence, were ascertained; and also the results of all amputations that were performed at a remote period. It was found that the number of deaths in the latter case was nearly double the former—from the delayed there were nearly twice as many died as from the early amputations, so that the result was very much in favor of early amputation. But still that does not give you the true comparison between the two modes. What you want to know is, supposing you have a hundred patients, you take fifty on whom you amputate immediately, and you take the other fifty and delay the

amputation for some weeks after the occurrence of the accident, will you save the greatest number out of the first fifty or out of the second fifty? Clearly out of those on whom you do not delay the amputation. There are several that will die in the meantime, so that they do not live to have amputation performed; to the number of deaths, therefore, that take place in the secondary amputation, you must add the number of those that do not live to the time that the operation should be performed—then the result becomes still more unfavorable in the case of secondary amputation. The result of experience both by the English and the French, in the last war, has been placed numerically in so striking a light, that there can be no question upon the subject.

In addition to the ample experience that is derived from these sources, it would be of little use for me to mention the more limited experience that has occurred to myself. We have no occasion, in civil practice, to perform operations under such circumstances in any great number of cases. I have, in the course of a number of years, had frequent occasion to perform operations immediately, in consequence of serious injuries; and I may mention, that in compound fractures, as in gun-shot wounds, so far as regards the time when the limb ought to be removed, in cases obviously requiring amputation, the result of these immediate or early amputations has been generally quite satisfactory in my experience. But suppose you wish to consider the matter without reference to experience at all; would you expect that a person, whether in a high state of health or not, would bear the simple clean cut of amputation, or the extensive laceration with splinter of the bone, and perhaps exposure of the joint, from a serious gun-shot wound, best? To my mind there is no hesitation in saying, that the simple cut of amputation is a kind of injury much less serious to the patient, and much more likely to do well and to preserve his life, than the very serious and complicated mischief that takes place in some of the worst gun-shot wounds.

Now, with respect to the place of amputating, in cases that require the loss of a member, it may be observed that, in general, you save as much of the limb as you can; but you must bear in mind the circumstance that I have just mentioned—the splintering of the bone in severe gun-shot wounds, and the way in which they may affect the bone at a considerable distance from the part at which the wound may have been actually received.

In the treatment of gun-shot wounds of the chest or abdomen, the principles must be very much the same as those which will guide your conduct in managing wounds of every kind occurring in those situations; and, in fact, the practical rules are simply those which are necessary to avert inflam-

mation. You find it necessary, in instances of this kind, to employ the most active antiphlogistic means; and under the employment of such means, recovery will take place in wounds that appear of the most desperate kind. You find patients recover where, if you considered merely the tract of the ball, you would suppose it must have injured in a most serious and irreparable way organs of great consequence.

I remember being sent for, to see a young man who had attempted to destroy himself. He got a loaded pistol, and put it to the left side of his chest and discharged it. I was summoned suddenly, and the person that came said that it would be of no use for me to go, because he was dying, and probably would not live till I arrived; but still he had been desired to fetch a surgeon, and therefore wished me to see him, whether dead or alive. When I came, I found the young man nearly in a state that justified the representation of the messenger who had come to me. He seemed almost dying; was in a state of the greatest depression; his pulse was hardly perceptible, his skin was pallid and cold, he was hardly able to utter a sound, and he looked like a dying man. There was an opening towards the anterior part of the chest, near the middle, on the left side, not far from the sternum; so that it seemed probable that the bullet had gone near the heart. Upon examining him carefully, I found the bullet under the spinal process of the vertebræ, nearly opposite to the part where it had entered in front. I divided the skin with a bistoury, and took out the ball. He was in so low a state, and so reduced, when I saw him, that it was necessary to put him in bed, and give him some wine and water to rally him. When he was placed in bed, he slowly recovered from this state of depression. However it appeared manifest that immediate effects were produced on an organ of consequence that would necessarily be fatal, and that all that could be done was, in proportion as the circulation recovered, to bleed him very freely, to starve him, to purge and to keep him in a state of perfect rest. That plan was pursued, in all its parts, to the utmost extent. Symptoms of considerable inflammation, which came on from the first, were obviated by venesection, purging, and the means that I have mentioned; in fact, he lost an immense quantity of blood. He was reduced, by these means, to death's door; however, he was a young person, and it so turned out that neither the heart nor the lungs had received serious injury. He recovered completely, and got quite well.

ITALIAN SCHOOL.

Notes of a Clinical Lecture on Fever.

By M. TOMMASINI.

THE patient who has just left the hospital in a state of perfect convalescence from fever, is worthy of attention. At first she presented a combination of symptoms calculated to perplex the most experienced practitioner; subsequently you saw, in the view which was taken, in the treatment adopted, and in the result, an evident confirmation of the pathological principles laid down in this school. The advanced age, the temperament and squalid aspect of the patient; the privations which she had undergone, the cold and wet to which she had been long exposed, did not appear to indicate a *phlogistic* affection. The symptoms which the patient had presented when seen at her own residence were these: coldness, tremors, with transient flushings of heat; extreme languor and sense of excessive muscular debility; depression and obvious weakening of the mental faculties; heaviness of the head, paleness of countenance, complete loss of appetite, and tendency to vomit. She had passed fifteen or sixteen days in this state, without receiving any assistance. A physician who was then called found something *phlogistic* in the state of the patient. She was bled twice, and briskly purged. The blood shewed no buffy coat; nevertheless, after these evacuations, some degree of relief was experienced. She was brought to this hospital on the twenty-second day of the disease, when she presented all the symptoms above-mentioned, with the exception of the chilliness, which had passed away; but the pulse was almost imperceptible, although rather quick; the tongue very dry and chapped; no thirst. Under these circumstances, what inference was to be drawn as to the real state and root of the disease? By what symptoms was the diagnosis to be decided? Read the treatise of Huxham on Nervous Fever; read the clear and precise description given by Borserius of this disease.

The description of low nervous fever to be found in the writings of Huxham, presents an acute state, which might

be called *hyposthenic*. That author himself appears to give us to understand that there exists in this fever a fund of atony, though he expresses himself in the language of the humoral pathology which at that time pervaded the schools. With regard to treatment, he appears to have proposed to himself, as the principal object, to support the strength. However, several of his remedies were of a depressing kind; such, for instance, were the emetics with which he began, and the various antimonials and diaphoretics to which he subsequently had recourse, although these did not prevent him from simultaneously employing stimulants. In order that all the benefit possible might be derived from the facts recorded by this celebrated observer, it would have been necessary to have distinguished the cases in which this phenomenon of profound prostration of nervous and muscular strength was combined with *true fever*, from those in which the same symptoms existed without any trace of fever; to have followed a treatment of the disease in these different cases decidedly either stimulant or contra-stimulant; to have examined a great number of results to decide whether, in the cases where the disease was constantly attended with true fever, the stimulants were borne and of use, as they often are under opposite circumstances; and to have ascertained whether, on the contrary, in the greater number of cases where fever was not present, the emetics and antimonials were as useful as in those which were attended with fever, however slight, and lastly to have examined the bodies after death. Unfortunately, however, in the days of Huxham, these things were not so rigorously attended to as they now are.

Borserius followed the English physician, in a great measure adopting his views, both as to the nature of the disease and its treatment.

Under my early masters I saw fever treated in a mixed and feeble manner—some recovering, and others sinking under it. About this time the doctrines of Brown were beginning to find their way into Italy; and notwithstanding the repugnance of my teachers, I began to adopt some of the ideas of the Scotch physician, in which I was joined by some of my colleagues, particularly the celebrated Rubini. Low nervous fever

was, according to this view, the type of acute *hyposthenia*; or, as we now call it, an acute state of profound contra-stimulus. Without any distinction of cases—without any regard to the circumstances, or even the most evident phlogistic symptoms—the disease was treated constantly and exclusively by means of powerful stimulants; or if this method was at all modified, it was in consequence of the great use then made of Kermes' mineral, and some other medicines;—but musk, ether, wine, and often laudanum and ammonia, were given in large doses. The good effect of some contra-stimulants could not but be feeble in the midst of such energetic stimuli. As to the rest, bleeding was rigorously forbidden; so that three ounces of blood would not have been taken from one laboring under the most severe pain in the head. To have attempted it would have been regarded as an infatuation. The greater number of those who were thus treated died, though some struggled through the disease. In the bodies of those who perished, I found many times abundant proofs of inflammation in the brain; but in others I could discover no organic change—probably for want of sufficient investigation; for the Brownian pathology was far from estimating morbid examinations with accuracy.

After having determined by more extended observation, and reviewed with impartiality the dangers of the exciting treatment, and the advantages of the anti-phlogistic, it became absolutely necessary to reform the Brownian doctrine on these points; and I was led to conclude that the source of an acute nervous affection, even when unaccompanied with fever, might be *phlogistic*, notwithstanding an imposing assemblage of symptoms, giving the appearance of debility. There may, however, exist an acute nervous condition depending upon loss of power, analogous to what occurs from some poisons, such as digitalis; at least I do not think that such a condition can be absolutely denied to exist. But then here there is no fever; and, consequently, that name cannot be applied without error. When this nervous state is accompanied by fever, the source of the malady is always phlogistic; and if there exists an acute nervous affection, of a phlogistic nature, the inflammatory diathesis which constitutes the source of the com-

plaint may shew itself by symptoms of excitement in various parts of the economy, as the brain, lungs, &c. The principal excitement is at first in the nervous system, and the inflammations which follow assume a particular character, entitling them to the appellation of nervous, owing to the condition of that system which precedes them.

But to return to our patient: I stated at her bed-side the reasons which led me to regard her complaint as essentially phlogistic, notwithstanding the appearance of debility and prostration of vital power, so great, indeed, that they rendered the skin cold, and the pulse sometimes almost imperceptible. These were, first, that the patient before her admission had either been benefited, or at least not injured by repeated bleeding and by purging. Secondly, because a true continued fever, although very slight, had always accompanied the illness. Thirdly, because the tongue was extremely dry; and, indeed, led me to suspect inflammation of the stomach and the presence of aphthæ.

The good effects of the treatment fully justified the diagnosis. Tamarinds, magnesia, and a few small doses of tartarized antimony, produced perceptible amendment. The development of inflammation of the lungs, even at this advanced period, sufficiently shewed the essential nature of the disease, and rendered it necessary to employ venesection. The blood presented a distinct buffy coat; the pulse rose, and became more decidedly indicative of fever. The nervous symptoms abated, the patient regained her strength, and ultimately recovered. Judge, then, for yourselves (and you can do it with all the certainty that our art admits of), what would have been the fate of this woman if she had been treated by means of stimulants; for it is very certain that, without the facts and principles on which the present medical doctrines are founded, the patient would have been subjected to treatment of this nature — treatment which seemed to be indicated by the symptoms, especially those of excessive debility.

With respect to the distinctions between low nervous fever (which is always *phlogistic*) and the nervous state without fever, they are fully developed in various works which I have published. Wherever there is continued fever, be it acute or chronic, it is the

effect or consequence of some inflammatory movement in the system; and this view has led me to recognize every true continued fever as symptomatic of some inflammation. If I have imagined that any exception exists as to this, it has not been in the low nervous fever, but in some fevers which appeared to be continued without really being so, and which may be kept up by some irritation which is itself either uninterrupted or very frequently repeated; irritation being taken in the sense attached to that word in the Italian school.

RUPTURED UTERUS.

To the Editor of the London Medical Gazette.

SIR,

I HAVE sent you a short account of a dreadful case of ruptured uterus, which very lately occurred in my neighbourhood, with the minutes of the post-mortem examination, and also an additional remark on biliary calculi, which, if you think proper to insert in your valuable journal, I shall feel obliged.

I am, Sir,

Your humble servant,

ROBT. SPACKMAN,

Memb. Roy. Coll. of Surgeons.

Lutterworth, Jan. 18, 1830.

Catherine Whitmore, aged 43, was between 8 and 9 o'clock in the morning of January 9, 1830, taken in labor of her eleventh child, and began to have towards midnight unusually severe pains, which continued until about 7 o'clock, Jan. 10, when during a terribly severe pain, a rent was heard so loud as to attract the attention of the women about her, who thought that the head or other presenting part (the midwife in attendance, it appears, was not certain what part presented,) had made some rapid progress through the pelvis; from that time, however, the pains ceased, or nearly so. But not apprehending the patient's life to be so much in danger, neither the midwife nor the woman's friends sent for me until 9 o'clock, Jan. 10: the messenger had scarcely left the house in order to fetch me, when the patient expired, without a

groan. I had myself attended this poor woman in some of her former labors, which were always very severe and dangerous, from a contracted state of the pelvis, but I had succeeded without the use of instruments. Although I was satisfied in my own mind that she died from rupture of the uterus, I pressed her friends to allow an examination, to which, with some difficulty, they consented.

Dissection.—On cutting through the integuments, and having pierced the peritoneum, a large quantity of liquor amnii escaped, mixed with blood: in proceeding to expose more fully the abdominal viscera, all doubt as to the nature of the accident which terminated the poor woman's existence, was removed; for the foetus was instantly seen, in the most beautiful manner, enveloped in its membranes, and having escaped into the cavity of the abdomen, through a large rent in the uterus, extending a little on its left side, from the cervix, nearly to the fundus uteri. The infant was lying with its head near the umbilicus of the mother, its occiput and back towards the left side, its hips and feet still remaining partially enclosed by the uterus, which was in a semi-contracted state; the placenta being in great measure separated from the uterine parietes. A large quantity of coagula was found in the right side of the abdominal cavity, which circumstance was no doubt in consequence of the woman having had her last pains while lying on that side. The other viscera, both abdominal and pelvic, were in a healthy state.

Biliary Calculi.—It probably will be remembered that I sent an account of some biliary calculi, which you obligingly inserted in your esteemed journal, vol. ii. p. 283. I there offered what I considered an hypothesis of my own, as to the cause of most biliary calculi having one end, as it were, broken off, or having a rubbed surface, similar in appearance to an articulating cavity, which circumstance is there supposed to arise from the friction of two or more calculi existing together in the gall-bladder. Since that I have discovered that the idea was by no means original, for Fab. Hildanus, after relating a remarkable case, in which he found two large calculi in the gall-bladder, says, "Major

lapis ex una parte, ubi A notatur, tantum excavatus est, ut tertiam fixè partem minoris excipere possit, eumquè à continua fricatione unius contra alterum ita excavatum fuisse, certum est."*

DISEASE OF THE URINARY ORGANS.

To the Editor of the London Medical Gazette.

Minster Yard, Jan. 12.

SIR,

SHOULD you deem the following short notes of a case, with the appearances upon dissection, of sufficient interest to be recorded in your journal, I shall feel obliged by the insertion.

In June last I was requested to visit an elderly man, who was supposed to have a stone in the bladder, but who would not consent to any operation, not even to be sounded. I understood the symptoms had been gradually developing themselves, and that now, in consequence of pain and the inconvenience of frequent micturition, he confined himself principally to bed. As an examination by the fingers was all he would permit, the diagnosis was of course very vague, though there was little difficulty in pronouncing the prostate in a state of considerable disease; a heavy, dull pain in the region of the left kidney was frequently complained of, but the constant discharge of bloody urine, mixed with a considerable quantity of pus, principally fixed his and our attention; in other respects, he said he was well, though the sallow countenance, foul tongue, and tumid belly, very much belied his assertion. I attended him from this time till his dissolution, which took place the 12th ult. when he died from exhaustion, without much suffering. The treatment was entirely palliative, as he would only take medicine when there was urgent distress. The bowels were generally soluble, the evacuations for the most part natural. There was at times sickness and vomiting of much bilious fluid; but as he loved to live well, and would not be constrained in the indulgence of his appetite, these disorders seemed mostly attributable to occasional excess. The urine, always copious, was sometimes pale, without any deposit; then quantities of blood and matter would pass, causing much

* Hildan. Observ. Chir. Cent. iv. Ob. 44.

pain and general irritation. Though he would permit neither examination nor operation during life, he was exceedingly anxious his body should be opened, and gave directions to that effect. It was done twelve hours after death in the presence of Mr. Matterson, Mr. Williams, and myself; Mr. W. performing the dissection. We were surprised on cutting through the integument at the immense quantity of fat, and on exposing the abdominal viscera, the quantity brought to view was sufficiently curious. The prostate gland was enlarged, and scirrhous throughout its structure; the bladder small, thickened, and contracted; the mucous membrane very red, and covered with a purulent secretion; the kidneys larger than natural, soft, pale colored; the pelvis and ureter in both very much enlarged; the left ureter distended to an enormous size; the liver hard as a board, and studded with tubercles, many in a state of suppuration: the other viscera were healthy.

In consequence of the disease of the bladder, and the small quantity of urine it was capable of containing, I presume nature effected relief by the great distention of the ureters and increased capacity of the pelvis of the kidneys, thus allowing considerable more space for the accumulation of the fluid. Dr. Pemberton observes, "in a disease of the urinary bladder, which is subservient to the kidneys, scarcely any diminution of bulk is to be perceived;" and he proceeds to draw some very sagacious conclusions as to the diagnosis of disease in the different abdominal viscera, dividing them into glands of supply and glands of waste, but how, with so much disease of the liver (a gland of supply), there should be such a great deposition of fat, is to me extraordinary, and seems well worthy of notice. From all that could be observed during the progress of the complaint, it appears that there was a sufficient portion of the liver sound enough to carry on its proper service in the animal economy, and hence we may infer, that but for the disease of the pelvic viscera, life might have been for some time longer protracted, though the patient's age was 72.

Your obedient servant,
H. S. BELCOMBE, M.D.

P.S. In reply to Dr. Kennedy's obser-

vations I can only say, that I was not aware of Dr. Darwall's communications, or I should have had equal pleasure in acknowledging I received the hint from him as from Mr. Hutchinson; but there is assuredly some difference in the statement of a few cases where a remedy seems to have been tried experimentally, and in giving the result of a practice where it has been steadily administered for some years; and, after all, Dr. D.'s cases are any thing but instances of chronic rheumatism. It would have been very easy for me to have loaded your pages with cases illustrative of the efficacy of the remedy in question, some even prior to 1823; but as it was a point on which professional gentlemen might so easily satisfy themselves, a brief communication was all that was necessary; and I cannot but think Dr. Kennedy's time would have been better occupied in adding to our information upon the subject, (as doubtless, upon the authority of his friend, he has tried the medicine, and can speak, therefore, as to its utility or otherwise,) than by an useless attempt to settle a question of precedence, which has never been raised.

AMPUTATION OF THE SCAPULA, &c.

To the Editor of the London Medical Gazette.

SIR,

IN your next number I will thank you to explain to your correspondent, J. M., that *you* were the aggressor, by heading a note with my signature affixed to it, as if *I* had been the operator; by which he professes himself to have been a disappointed reader;—and at the same time inform him that the case in question was sent to the surgeons of St. Bartholomew's Hospital for examination.

Should your correspondent J. M. wish for information as to the professional character of the operator mentioned in my note (Gazette, 28th Nov. 1829), refer him to the "Naval, Military, and Private Practitioners Emauensis, Medicus et Chirurgicus, &c. by Ralph Cuming, M.D. R.N. Medical Superintendent of his Majesty's Naval

Hospital, Antigua; published by Matthews and Leigh, 18, Strand, 1806."

Yours,

A. COPLAND HUTCHISON.

Jan. 18, 1860.

[The heading alluded to was on the wrapper, which we are fain to leave to the discretion of the printer. A notice of the case in question will be found in the edition of Cooper's Surgical Dictionary just published, page 564. We are informed by Mr. Hutchison, however, that though the injury requiring the operation was inflicted by the shot, yet that the amputation of the humerus scapula and clavicle was performed by the surgeon. This he ascertained by a reference to the original document.]

FUNCTION OF HEARING.

To the Editor of the London Medical Gazette.

St. Maw's, Cornwall, Dec. 27, 1860.

SIR,

THE writer of an article in the Medical Gazette of Nov. 28th, in allusion to the circumstance of hearing being facilitated by opening the mouth, and to the generally supposed cause of this being an easier transmission of sound through the Eustachian tubes, observes, that the alteration in the form of the external auditory passage, which is produced by the opening of the mouth, has been overlooked. In reply I beg to observe, that Richerand, in his valuable treatise on Physiology, long since advanced the opinion, that hearing was much more assisted by the enlargement of the aperture of the meatus auditorius than from any other cause. He says, "when a man listens attentively, and with his mouth open, the condyles of the lower jaw being depressed and brought forward, the openings are evidently enlarged, as may be ascertained by putting the little finger into the ear, at the moment of depressing the lower jaw." And such, I believe, sir, has been the opinion of most physiologists for the last twenty years. If the meatus auditorius is wanting, as is the case with a patient of mine, deafness is the inevitable consequence.

I remain, Sir,

Your respectful servant,

L. S. BOYNE.

SOME

REMARKS ON ANGINA PECTORIS,

And on Symptoms resembling it.

By J. K. WALKER, M.D.

WHOEVER has been conversant with morbid anatomy, will often have been struck with the singular appearances which have presented themselves after death, so contrary to what, from the preceding symptoms, it would have been natural to have looked for. It has been well observed by a French writer, "that a given symptom is no surer test of the lesion which produces it, than the view, post mortem, of a structural alteration, would indicate the symptom during life; yet what rational practitioner would reject the evidence of symptoms, or that of dissection?" I have been led to these remarks by the inspectio cadaveris of a patient, who, for more than three years back, had been considered, from the symptoms he evinced, as laboring under angina pectoris, but whose appearance after death presented a mass of disease in the region of the liver, not, however, without some apparent enlargement of the heart, but with no traces of ossification either in the coronary arteries or the aorta. I am aware that the long-prevailing belief, that every case of angina pectoris originates exclusively in an ossified state of the coronary arteries, is now yielding to the evidence of facts. In a majority of instances, indeed, the heart does undergo, either primarily or in the progress of the disease, some change; but it is by no means true, that ossification is the only pathological condition of the heart peculiar to this disease. On the other hand, many who never evinced the slightest symptom of angina pectoris while living, have exhibited evidence of this sort on examination after death, where the coronary arteries were like tubes of bone.

What may originally be a neuralgic affection of the heart, without lesion of structure, may, in a series of years, terminate in structural derangement, for it is hard to conceive of any organ that a repeated increase of action can exist for any length of time, without producing more or less of organic disease. We are but in the infancy of our knowledge of neuralgic affections, but

pain and general irritation. Though he would permit neither examination nor operation during life, he was exceedingly anxious his body should be opened, and gave directions to that effect. It was done twelve hours after death in the presence of Mr. Matterson, Mr. Williams, and myself; Mr. W. performing the dissection. We were surprised on cutting through the integument at the immense quantity of fat, and on exposing the abdominal viscera, the quantity brought to view was sufficiently curious. The prostate gland was enlarged, and scirrhous throughout its structure; the bladder small, thickened, and contracted; the mucous membrane very red, and covered with a purulent secretion; the kidneys larger than natural, soft, pale colored; the pelvis and ureter in both very much enlarged; the left ureter distended to an enormous size; the liver hard as a board, and studded with tubercles, many in a state of suppuration: the other viscera were healthy.

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usual, there was no conversion of substance into osseous matter, either in the heart itself or the coronary arteries. The parietes of the left ventricle, and the larger vessels, were dilated. The lungs were of a natural color, but the principal morbid appearance was found in the right hypochondriac region. The liver was much enlarged, and on its convex surface a mixture of grey and yellow spots, and in some parts tubercles of various sizes, but no appearance of abscess. These tubercles resembled very closely the figure in the first of Dr. Farr's plates, in his *Morbid Anatomy of the Liver*.

It is not easy to decide in which viscus the disease first began, or whether the angina pectoris was in the first instance only the consequence of functional, and not structural, disease of the heart. The probability is, that the enlargement of the liver, with its constant pressure against the diaphragm, as the primary cause, had produced a functional disturbance only in the heart at first, and subsequently by continued irritation, organic mischief in the substance of the heart itself.

In the *Transactions of the College of Physicians*, 1813, some valuable practical observations were published, in a paper by Dr. Latham, proving that enlargement and disease of the liver occasionally give rise to symptoms that have been mistaken for those of angina pectoris, and other affections of the thoracic viscera, even by very eminent physicians. Of the two cases there recorded, the first was that of a clergyman of the University of Oxford, who had frequently labored under angina pectoris, and had as often been relieved by a diuretic and purgative treatment, though the symptoms always returned after short intervals. Under a supposition that some hepatic derangement existed, a mercurial plan was adopted, which gave decided relief for a much longer interval than usual. The result of the case, however, was, that on preparing for his journey into the country, he suddenly fell down and expired. On examining the body, there was no disease discoverable throughout the body, except an enlargement of the liver, which was thought to be harder than usual, and which appeared to be pushing against the diaphragm, so as to form, as it were, a sort of recess within it, and in such a manner as to diminish the

area of the lungs, and consequently impede the thoracic circulation.

Paroxysms of hysteria are sometimes so blended with neuralgic affections as to create considerable embarrassment to the practitioner; and in more than one instance I have seen repeated paroxysms of pain in the breast so closely resembling angina pectoris as to excite the greatest fears for the result. We admitted into the dispensary, about a year ago, a patient of this description, æt. 26, who was unmarried, and subject to profuse menstrual discharge. The attacks were very frequent for the space of six weeks, and invariably accompanied with intense pain in the region of the thorax, inclining to the left side, and always with more or less palpitation. A great variety of remedies were tried without success, for a long time, and though she ultimately recovered with the aid of tonics, yet she has since had some threatenings of a return. Another patient of this description I was desired to see more than twelve months ago. She was under the care of my friend, Mr. Hudson, surgeon of this place, and had for some years been subject to rheumatic affections, so as to lead us to suppose that it might be a metastasis to the heart. The attacks continued to return for some months, and so distinct were the intermissions that it was difficult to a superficial observer to detect any deviation from perfect health. My confidence in her recovery was founded on the combination of hysteria with the other symptoms. The pain in the thorax during the paroxysm was of the most excruciating kind, and the palpitation violent, continuing for more than an hour together. Blood-letting, leeches, blisters, antispasmodics, &c. afforded no permanent relief. She gradually recovered under the use of the metallic tonics, the oxydum zinci, and the cuprum ammoniatum.

I am at this moment attending a young lady, æt. 14, residing in this neighbourhood, who for the last ten months has had almost daily attacks of pain in the side, with syncope, and sometimes palpitation. She has not yet menstruated. Her appetite and her general health in other respects are good, and there is no tenderness to be felt in any part of the spinal column. She had been the subject of a variety of treatment, by Mr. Dean, surgeon, in

I think it is not unreasonable to suppose, that if disease exists in that ganglion of nerves which supplies the heart, it may extend to the various filaments connected with it, and may be, and is, in the opinion of some writers, not unfrequently a cause of neuralgic affection of the heart, and of all those symptoms which have usually been ascribed to angina pectoris.

How is it that patients have had one or two paroxysms of this disease, and afterwards lived several years, without any return of the attack, unless that the disease was, in those cases at least, for the most part sympathetic? There is reason to believe that contiguous organs, the liver, the stomach, the spleen, the lungs, have all at different times played a conspicuous part in this tragical disease. I have more than once seen attacks in the latter stages of phthisis pulmonalis, resembling, in all their characteristic features, those of angina pectoris. There was present in these instances, that acute constrictory pain at the lower part of the sternum, with palpitation of the heart and violent dyspnoea, so characteristic of this terrible malady. In two cases, at least, I have recorded accurate minutes of the progress of the disease, and in both, purulent expectoration had existed for many months, with most of the ordinary symptoms of phthisis, before the appearance of these painful paroxysms. In one of these, a violent attack at last put a sudden period to the existence of the patient. As no post mortem investigation took place in either of these cases, I am not at liberty to suppose that the heart itself was exempt from all structural disease; but we had no reason, from the state of the pulse betwixt the paroxysms, to conclude that the malady had extended its ravages beyond the lungs themselves. Sympathetic angina, too, may arise from a diseased state of most of the adjacent viscera; nay, in some instances, a mere functional derangement of the digestive organs is said to have occasioned it; and an eminent medical reviewer, with whose opinion on this disease I perfectly concur, has recorded a case of this kind in a gentleman when he was fifty years old, who, during the last ten years, had entirely escaped. In another instance in the same work, a singular modification of this disease is recorded, in one patient, an old and celebrated sports-

man, where extreme tenderness, of small extent, seated in the middle of the dorsal spine, uniformly attended every attack. There can be no doubt that the nature of this affection varies in different temperaments, according to the age, strength, temperament, and other causes, which serve to modify its violence and manner of attack.

No man can doubt that many pseudo cases of angina pectoris are foisted upon the profession, as so many instances of recovery from this formidable disease; violent pain in the epigastric region, accompanied with pain in the arm, may arise from other causes; other conditions, as well as sternalgia, are requisite to form a legitimate case of this disease; but if, along with this, there is a violent dyspnoea and palpitation of the heart, a suspension of sense and voluntary motion, the disease can hardly be mistaken. The fatal case I have already alluded to was of this nature. In the early stages of the disorder, which made its first appearance about three years ago, the patient, a gentleman, æt. 62, was seized sometimes whilst walking, or after any casual exertion, though proper care was taken to avoid every exciting cause. During the last year of his life he was occasionally seized with a fit during the night-time, continuing for an hour or two. Though various plans of treatment were resorted to, none gave him more than temporary relief; one of the most violent paroxysms he ever had took place while the surface of the precordial region was covered with an eruption from the tartar emetic ointment. Among other anodynes, the sulphate of morphia was used, and seemed to have some influence on the return and duration of the paroxysms. His habits, during the whole of his life, were of a sober and abstemious kind, and there does not appear to have been any considerable pain in the right hypochondriac region, at least none that called for active treatment. For years he had derived great benefit from the Thorpe arch and the Harrogate waters, and had habitually taken aperient pills with ext. colocynth. comp. ipecacuan. and pil. hydrargyri, a formula which usually agreed with him. The last attack, which proved fatal, occurred in the night-time, in the month of April last, after a longer freedom than usual. Though, on examination, the heart appeared larger than

usual, there was no conversion of substance into osseous matter, either in the heart itself or the coronary arteries. The parietes of the left ventricle, and the larger vessels, were dilated. The lungs were of a natural color, but the principal morbid appearance was found in the right hypochondriac region. The liver was much enlarged, and on its convex surface a mixture of grey and yellow spots, and in some parts tubercles of various sizes, but no appearance of abscess. These tubercles resembled very closely the figure in the first of Dr. Farr's plates, in his *Morbid Anatomy of the Liver*.

It is not easy to decide in which viscus the disease first began, or whether the angina pectoris was in the first instance only the consequence of functional, and not structural, disease of the heart. The probability is, that the enlargement of the liver, with its constant pressure against the diaphragm, as the primary cause, had produced a functional disturbance only in the heart at first, and subsequently by continued irritation, organic mischief in the substance of the heart itself.

In the *Transactions of the College of Physicians*, 1813, some valuable practical observations were published, in a paper by Dr. Latham, proving that enlargement and disease of the liver occasionally give rise to symptoms that have been mistaken for those of angina pectoris, and other affections of the thoracic viscera, even by very eminent physicians. Of the two cases there recorded, the first was that of a clergyman of the University of Oxford, who had frequently labored under angina pectoris, and had as often been relieved by a diuretic and purgative treatment, though the symptoms always returned after short intervals. Under a supposition that some hepatic derangement existed, a mercurial plan was adopted, which gave decided relief for a much longer interval than usual. The result of the case, however, was, that on preparing for his journey into the country, he suddenly fell down and expired. On examining the body, there was no disease discoverable throughout the body, except an enlargement of the liver, which was thought to be harder than usual, and which appeared to be pushing against the diaphragm, so as to form, as it were, a sort of recess within it, and in such a manner as to diminish the

area of the lungs, and consequently impede the thoracic circulation.

Paroxysms of hysteria are sometimes so blended with neuralgic affections as to create considerable embarrassment to the practitioner; and in more than one instance I have seen repeated paroxysms of pain in the breast so closely resembling angina pectoris as to excite the greatest fears for the result. We admitted into the dispensary, about a year ago, a patient of this description, æt. 26, who was unmarried, and subject to profuse menstrual discharge. The attacks were very frequent for the space of six weeks, and invariably accompanied with intense pain in the region of the thorax, inclining to the left side, and always with more or less palpitation. A great variety of remedies were tried without success, for a long time, and though she ultimately recovered with the aid of tonics, yet she has since had some threatenings of a return. Another patient of this description I was desired to see more than twelve months ago. She was under the care of my friend, Mr. Hudson, surgeon of this place, and had for some years been subject to rheumatic affections, so as to lead us to suppose that it might be a metastasis to the heart. The attacks continued to return for some months, and so distinct were the intermissions that it was difficult to a superficial observer to detect any deviation from perfect health. My confidence in her recovery was founded on the combination of hysteria with the other symptoms. The pain in the thorax during the paroxysm was of the most excruciating kind, and the palpitation violent, continuing for more than an hour together. Blood-letting, leeches, blisters, antispasmodics, &c. afforded no permanent relief. She gradually recovered under the use of the metallic tonics, the oxydum zinci, and the cuprum ammoniatum.

I am at this moment attending a young lady, æt. 14, residing in this neighbourhood, who for the last ten months has had almost daily attacks of pain in the side, with syncope, and sometimes palpitation. She has not yet menstruated. Her appetite and her general health in other respects are good, and there is no tenderness to be felt in any part of the spinal column. She had been the subject of a variety of treatment, by Mr. Dean, surgeon, in

mation. You find it necessary, in instances of this kind, to employ the most active antiphlogistic means; and under the employment of such means, recovery will take place in wounds that appear of the most desperate kind. You find patients recover where, if you considered merely the tract of the ball, you would suppose it must have injured in a most serious and irreparable way organs of great consequence.

I remember being sent for, to see a young man who had attempted to destroy himself. He got a loaded pistol, and put it to the left side of his chest and discharged it. I was summoned suddenly, and the person that came said that it would be of no use for me to go, because he was dying, and probably would not live till I arrived; but still he had been desired to fetch a surgeon, and therefore wished me to see him, whether dead or alive. When I came, I found the young man nearly in a state that justified the representation of the messenger who had come to me. He seemed almost dying; was in a state of the greatest depression; his pulse was hardly perceptible, his skin was pallid and cold, he was hardly able to utter a sound, and he looked like a dying man. There was an opening towards the anterior part of the chest, near the middle, on the left side, not far from the sternum; so that it seemed probable that the bullet had gone near the heart. Upon examining him carefully, I found the bullet under the spinal process of the vertebræ, nearly opposite to the part where it had entered in front. I divided the skin with a bistoury, and took out the ball. He was in so low a state, and so reduced, when I saw him, that it was necessary to put him in bed, and give him some wine and water to rally him. When he was placed in bed, he slowly recovered from this state of depression. However it appeared manifest that immediate effects were produced on an organ of consequence that would necessarily be fatal, and that all that could be done was, in proportion as the circulation recovered, to bleed him very freely, to starve him, to purge and to keep him in a state of perfect rest. That plan was pursued, in all its parts, to the utmost extent. Symptoms of considerable inflammation, which came on from the first, were obviated by venesection, purging, and the means that I have mentioned; in fact, he lost an immense quantity of blood. He was reduced, by these means, to death's door; however, he was a young person, and it so turned out that neither the heart nor the lungs had received serious injury. He recovered completely, and got quite well.

ITALIAN SCHOOL.

Notes of a Clinical Lecture on Fever.

BY M. TOMMASINI.

THE patient who has just left the hospital in a state of perfect convalescence from fever, is worthy of attention. At first she presented a combination of symptoms calculated to perplex the most experienced practitioner; subsequently you saw, in the view which was taken, in the treatment adopted, and in the result, an evident confirmation of the pathological principles laid down in this school. The advanced age, the temperament and squalid aspect of the patient; the privations which she had undergone, the cold and wet to which she had been long exposed, did not appear to indicate a *phlogistic* affection. The symptoms which the patient had presented when seen at her own residence were these: coldness, tremors, with transient flushings of heat; extreme languor and sense of excessive muscular debility; depression and obvious weakening of the mental faculties; heaviness of the head, paleness of countenance, complete loss of appetite, and tendency to vomit. She had passed fifteen or sixteen days in this state, without receiving any assistance. A physician who was then called found something *phlogistic* in the state of the patient. She was bled twice, and briskly purged. The blood shewed no buffy coat; nevertheless, after these evacuations, some degree of relief was experienced. She was brought to this hospital on the twenty-second day of the disease, when she presented all the symptoms above-mentioned, with the exception of the chilliness, which had passed away; but the pulse was almost imperceptible, although rather quick; the tongue very dry and chapped; no thirst. Under these circumstances, what inference was to be drawn as to the real state and root of the disease? By what symptoms was the diagnosis to be decided? Read the treatise of Huxham on Nervous Fever; read the clear and precise description given by Borserius of this disease.

The description of low nervous fever to be found in the writings of Huxham, presents an acute state, which might

be called *hyposthenic*. That author himself appears to give us to understand that there exists in this fever a fund of atony, though he expresses himself in the language of the humoral pathology which at that time pervaded the schools. With regard to treatment, he appears to have proposed to himself, as the principal object, to support the strength. However, several of his remedies were of a depressing kind; such, for instance, were the emetics with which he began, and the various antimonials and diaphoretics to which he subsequently had recourse, although these did not prevent him from simultaneously employing stimulants. In order that all the benefit possible might be derived from the facts recorded by this celebrated observer, it would have been necessary to have distinguished the cases in which this phenomenon of profound prostration of nervous and muscular strength was combined with *true fever*, from those in which the same symptoms existed without any trace of fever; to have followed a treatment of the disease in these different cases decidedly either stimulant or contra-stimulant; to have examined a great number of results to decide whether, in the cases where the disease was constantly attended with true fever, the stimulants were borne and of use, as they often are under opposite circumstances; and to have ascertained whether, on the contrary, in the greater number of cases where fever was not present, the emetics and antimonials were as useful as in those which were attended with fever, however slight, and lastly to have examined the bodies after death. Unfortunately, however, in the days of Huxham, these things were not so rigorously attended to as they now are.

Borserius followed the English physician, in a great measure adopting his views, both as to the nature of the disease and its treatment.

Under my early masters I saw fever treated in a mixed and feeble manner—some recovering, and others sinking under it. About this time the doctrines of Brown were beginning to find their way into Italy; and notwithstanding the repugnance of my teachers, I began to adopt some of the ideas of the Scotch physician, in which I was joined by some of my colleagues, particularly the celebrated Rubini. Low nervous fever

was, according to this view, the type of acute *hyposthenia*; or, as we now call it, an acute state of profound contra-stimulus. Without any distinction of cases—without any regard to the circumstances, or even the most evident phlogistic symptoms—the disease was treated constantly and exclusively by means of powerful stimulants; or if this method was at all modified, it was in consequence of the great use then made of Kermes' mineral, and some other medicines;—but musk, ether, wine, and often laudanum and ammonia, were given in large doses. The good effect of some contra-stimulants could not but be feeble in the midst of such energetic stimuli. As to the rest, bleeding was rigorously forbidden; so that three ounces of blood would not have been taken from one laboring under the most severe pain in the head. To have attempted it would have been regarded as an infatuation. The greater number of those who were thus treated died, though some struggled through the disease. In the bodies of those who perished, I found many times abundant proofs of inflammation in the brain; but in others I could discover no organic change—probably for want of sufficient investigation; for the Brownian pathology was far from estimating morbid examinations with accuracy.

After having determined by more extended observation, and reviewed with impartiality the dangers of the exciting treatment, and the advantages of the anti-phlogistic, it became absolutely necessary to reform the Brownian doctrine on these points; and I was led to conclude that the source of an acute nervous affection, even when unaccompanied with fever, might be *phlogistic*, notwithstanding an imposing assemblage of symptoms, giving the appearance of debility. There may, however, exist an acute nervous condition depending upon loss of power, analogous to what occurs from some poisons, such as digitalis; at least I do not think that such a condition can be absolutely denied to exist. But then here there is no fever; and, consequently, that name cannot be applied without error. When this nervous state is accompanied by fever, the source of the malady is always phlogistic; and if there exists an acute nervous affection, of a phlogistic nature, the inflammatory diathesis which constitutes the source of the com-

‘tremely ill provided with such support is the art which we profess. Enough of difficulty, one should think, meets us in the peculiarities of constitution and the variable circumstances attendant on every case to which we are called, without adding to our troubles by rendering our remedies of none effect through inattention. Practitioners, in general, are regardless, or not sufficiently mindful, of the vast advantages of having a standard, according to which the agents they employ may be adjusted, without which all their attempts to generalize are vain; medicine must remain ever in a state of empiricism—a mere conjectural art; and this, while the progress of chemistry, from which so much might otherwise be expected, has been of late years so steady, uniform, and exact. In truth, without a fixed determination to be accurate, no man can presume to be a benefactor to his profession; nor can we see what the most mature judgment—that faculty which must stand the physician instead of those rules and precedents which make the practice of the other learned professions comparatively easy—we see not, we repeat, how any practitioner can contribute to the advancement of his art by even the most mature judgment, unaided by habits of accurate observation. Though he prescribe a remedy simply because he *conjectures* that its effect will be salutary, it is at least in his power to *ascertain* the exact composition of that remedy, and to *assure* himself of its certain or uncertain result; and he who will not exert himself so far, is unworthy of the noble art to which he belongs. Let us hope that by those who are engaged in the business of medical education, this principle may be strongly impressed, and never lost sight of.

Since we find that a national pharmacopœia affords a standard so desirable, we are naturally led to inquire, why its advantages have not been long since enhanced? Why, instead of publishing, as it were, capriciously, at irregular intervals, and in three distinct parts of the empire, separate productions for partial use; why we cannot have one great work for the British empire at large? The question, we believe, has been asked long ago: yet it is not easy to conceive why the project has never been attempted. What insurmountable difficulties should obstruct a *reunion* or de-

putation of the three Colleges of Physicians, expressly assembled to settle upon such a code? We should be unwilling to attribute the defect of so much to be wished for a consummation to frivolous observance of etiquette; but so things are, and so we suppose they must remain for some time longer. A new pharmacopœia is forthcoming from the London college; the pharmacopœia of Edinburgh is not very old; and the book under consideration may, as we have said, be looked upon as the most recent and authentic *code pharmaceutique* for our Irish brethren.

The records of pharmaceutical medicine in Ireland need not be traced back quite so far as the year 1542, the date of the codex of Nuremberg, the first ever published in Europe; nor the year 1618, when that of London first appeared; in fact, we may pass nearly over the subsequent two centuries, and in 1807 we find the first pharmacopœia made its appearance in the sister kingdom—a meagre performance, that should have been consigned to oblivion long ago by the repeated publication of successive revisions. It is, indeed, the fate of such productions to become obsolete in the course of time, and to be regarded as the old almanacks of medicine; but in the twenty years which immediately followed the appearance of the latter work, what revolutions, and what new arrangements occurred in chemical science, and in every branch of human knowledge connected with the formation of a pharmacopœia! A new one was then imperatively required; and at length, after many delays, forth it came in the year 1826. It was, of course, the production of many heads; but of the committee appointed by the College, Dr. Barker was, we understand, the principal member. “On him devolved the task of arranging the materials, and making the requisite experiments; and particularly for that portion of the work which contains the acids, alkalies, earths, alkaline and earthy salts, the sulphureous and metallic preparations.” And this is the portion of the Pharmacopœia on which he makes his “observations, chemical and practical,” in the volume before us.

Nothing can be more meagre than the form of the original work; it is, indeed, the fault of all the British Pharmacopœias: precepts and dogmatic directions are given in abundance, but no

hint at the reason or necessity of any process. In this respect the Parisian Codex has a decided superiority; it is comparatively a most interesting book. Dr. Barker's grand object seems to have been to supply the deficiency of the new Pharmacopœia. He presents us with the rationale of every process, conformably with modern chemical principles; compares his forms of preparation with those of similar works; and assigns his motives of preference. We have then the medical properties and suitable doses of each article subjoined, with remarks resulting from the writer's experience. On the whole he has given us an valuable practical book, so far as he has gone, and we cannot help regretting that he has left the remaining part to be treated by other hands.

Among the new articles of preparation introduced into the Dublin Pharmacopœia, we observe "Prussic acid;" and we shall take leave to extract some portion of the ample details with which Dr. Barker has favored us on this powerful drug.

"Prussic Acid.—Take of cyanuret of mercury an ounce* ; muriatic acid, by measure, seven drachms; water, by measure, eight ounces. Distil into a refrigerated receiver eight ounces, by measure, to be kept in a well corked bottle, in a cool and dark place. The specific gravity of this acid is to the specific gravity of distilled water as 998 to 1000. **Remarks.**—In this process the cyanuret (or cyanide) of mercury is decomposed by the muriatic acid; the hydrogen uniting with the cyanogen, and changing it into Prussic acid, which rises and passes over into the receiver; the corrosive muriate or chloride of mercury remains in the retort, and as the residual liquor cools, deposits its usual spicular crystals. The changes which take place in this instance, and the atomic qualities transferred, are represented in the following scheme. **Materials:** 1 mercury (=200) + 2 cyanogen (=52) = 1 bichyanide of mercury (=252); 2 chlorine (=72) + 2 hydrogen (=2) = 2 muriatic acid (=74). **Products:** 2 cyanogen (=52) + 2 hydrogen (=2) = 2 Prussic acid vapour (=54); 1 mercury (=200) of 2 chlorine (=72) = 1 bichloride of mercury (=272).

* Cyanuret of mercury is another novelty in the new Pharmacopœia. See Dr. Barker's "Observations," p. 296, 800.

"On reference to the tables of muriatic acid, it will be found that 74 parts of muriatic acid gas are contained in 229·8 parts of liquid muriatic acid, of specific gravity 1160; consequently, 480 grains, or 1 ounce of cyanuret (bichyanide) of mercury, will require 437 grains of the same liquid acid for complete decomposition, which is but a little less than the quantity directed in the pharmaceutical process; the weight of 7 drachms by measure of muriatic acid of specific gravity 1160, being 462·8 grs.

"An experiment was made in which equal weights of cyanuret (bichyanide) of mercury and muriatic acid were employed. The Prussic acid yielded by this process reddened litmus paper, and gave a precipitate with solution of nitrate of silver. The quantity of muriatic acid used in the latter case, is more than sufficient for the decomposition of the bichyanide of mercury. The quantity of liquid Prussic acid found by the process of the Pharmacopœia, as above given, amounted to about 7 oz. 5 drs. It had the specific gravity of 998, and was consequently much diluted with water, which, with an agent of such great activity, is an advantage, as its dose can be apportioned with more exactness than if the acid were stronger. By several other processes it may be obtained of much greater strength, but no advantage is thereby gained, as it cannot be administered in the concentrated state, but must in every case be diluted. The main object is to obtain the whole of the hydrocyanic acid from the materials, and of a certain fixed strength, whilst the dilution with water assists the exact regulation of the dose.

"Tests of its Purity.—The pure liquid acid is limpid and colorless. It has a strong smell, which causes much irritation in the nostrils, with a peculiar sensation extending downwards into the trachea; and if inhaled incautiously, and in large quantity, producing giddiness or faintness. The latter effect is, however, more likely to arise from a strong acid than from the dilute acid of this Pharmacopœia. Its taste is peculiar, resembling that of bitter almonds or laurel leaves. The attempt to taste it should be made with great caution, as it is a most active poison.

"The specific gravity of water is diminished by absorbing Prussic acid vapour, in which respect this acid resembles ammonia. Therefore, specific

gravity affords an estimate of its strength; the less the specific gravity, the stronger the liquid acid. But, according to the experiments of Dr. Ure, specific gravity is not a rigorously exact criterion of the strength of liquid Prussic acid. He states that liquid acid at sp. gr. 996, contains about double the quantity of real acid which it does at sp. gr. 998. Dr. Ure proposes as a more accurate mode than specific gravity for determining the quantity of real Prussic acid in water, the use of the red oxide of mercury prepared by nitric acid; the *nitric oxide of mercury* of this Pharmacopœia. To apply this test, some of the oxide should be reduced to fine powder, dried with a moderate heat, and about 40 or 50 grains of this powder carefully weighed; 100 grains, *by measure*, of this acid, of specific gravity previously determined, passed into a glass tube, and the pulverized red oxide gradually added, which on agitation readily dissolves, so long as any disengaged Prussic acid is present; the difference in the weights of the residual red oxide and of that originally taken gives the weight of the portion dissolved by the Prussic acid. The real Prussic acid, corresponding in quantity to the red oxide of mercury dissolved, is found by viewing the changes thus: a bichloride of mercury is formed, as given in the preceding scheme; two atoms of the oxygen contained in the peroxide of mercury, uniting with two atoms of hydrogen in the Prussic acid to form water, and two atoms of cyanogen with one of mercury, to form bichloride of mercury. Hence it follows that every 216 parts of peroxide of mercury indicate 54 parts of Prussic acid vapour, or that the Prussic acid is exactly 1-4th of the weight of the peroxide of mercury, and therefore for every four parts of the red oxide dissolved, one part of Prussic acid existed in the liquor.

“ The Prussic acid of this Pharmacopœia should have the sensible qualities above described, and 100 parts of it, by weight, should dissolve a little less than 6·4 parts of red oxide of mercury, reduced to a fine powder; and therefore contain 1·6 of real Prussic acid.

“ An exact mode of detecting small quantities of Prussic acid is of great importance, more especially when the acid has acted as a poison. In water it may be detected, according to Dr. Ure's experiments, by making the liquid con-

taining the Prussic acid slightly alkaline by potash, adding a few drops of a solution of the sulphate of copper, and then sufficient muriatic acid to redissolve the excess of oxide of copper. The liquid will appear more or less milky, according to the quantity of the Prussic acid present. A quantity of this acid in water, not exceeding the 1-20,000th of the mixture, may be discovered by this test.

“ Should the Prussic acid be contaminated by muriatic acid, which will happen if too much of the latter acid was used in the process of preparing the Prussic acid; this can be ascertained by neutralizing the liquor with ammonia, and evaporating with a heat, at the end of the process, not exceeding 212°. If muriatic acid was present, muriate of ammonia will remain. Prussic acid may be purified from muriatic acid, by adding a small quantity of bichloride of mercury, and redistilling the mixture.

“ *Uses.—Medicinal.*—In the dilute state, it is recommended as a remedy in phthisis pulmonalis, and is reported to allay irritation and diminish the frequency of cough; but its curative efficacy in this disease is very doubtful. In simple dry cough, apparently connected with spasm, it is said to be beneficial, and accordingly it is found to be occasionally useful in spasmodic asthma. In hooping cough it also affords some relief. It has been reported to calm the irritability of the uterus, even in cases of cancer, and to moderate the morbid activity of the heart; and it appears to have some specific action on mucous surfaces. It may be useful here to advert to its *poisonous* qualities, for the purpose of reminding the prescriber of the great caution to be observed in the use of this remedy. When applied in its concentrated form to the tongue, fauces, eye, or even to the external surface, by spreading it over the skin, it acts as a most virulent poison; and in the quantity of one or more drops, varying with the strength of the acid, vigour of the individual, and his previous habits in respect to its use, it causes immediate death. A single drop of a very strong acid passed into the throat of a strong dog has caused it to drop dead; and an animal is instantly killed by drawing a feather dipped in the strong liquid acid across the eye-ball. Scarcely any irritability

can be detected in the muscles of animals poisoned by Prussic acid. A sufficient dose of the more diluted acid of this Pharmacopœia would also be destructive of human life; the prescriber should immediately desist from its use when giddiness, vomiting, pain and sense of tightness at stomach, faintness, stupor, or sensations of weight at the top of the head, comes on.

“As remedies for the effects of this poison, when the quantity swallowed is small, Orfila recommends that full vomiting should be excited by twelve grains of sulphate of zinc, dissolved in a glass of water, or by three or four grains of sulphate of copper; then strong coffee, prepared by infusing for ten minutes a quart of boiling water on eight ounces of coffee, and then straining; three or four table-spoonful of oil of turpentine mixed with the coffee, to be given at intervals of half an hour. If stupor and insensibility have come on, the immediate application of the stomach-pump should be had recourse to.

“Dose.—From two or three drops (grains) to half a drachm, by measure. The smaller dose to be commenced with, and gradually increased, a sufficient time being suffered to elapse between each dose.”

It is to be regretted, that in the compilation of this new Pharmacopœia, the Irish College did not avail themselves of the imperial standards of measure. This oversight they cannot but feel the propriety of correcting in their next revision. We recollect some excellent suggestions on the subject from the writer of an article in the second volume of the Dublin Philosophical Journal, and we trust they may be turned to account.

In the materia medica department we notice the introduction of the new articles. *Secale cornutum* (ergot of rye), *Croton tiglium*, iodine, (and the tincture in a subsequent part of the work), cyanuret of iron (Prussian blue), *Pyrola umbellata*, bismuth (for the subnitrate), and Moxa, under the head of *Artemisia chinensis et indica*.

The Annual Biography and Obituary:
1830.

How fatal has the year just closed been to science! In the list before us we find the names of three of the most remarkable men who have ever devoted

themselves to its cultivation—Davy, Wollaston, and Young, all gifted with extraordinary minds, but those of very different natures, and engaged in the pursuit of distinct objects. The present volume contains many most interesting details with respect to these and numerous other men, whose names are familiar in the world, and which render it of great interest to the general reader; but it is to those who belonged directly or indirectly to our own profession that our attention must be limited. We purpose then laying before our readers some extracts illustrative of the biography of the distinguished philosophers whom we have mentioned, and of a physician who for many years enjoyed a considerable share of reputation, and who by his lectures and numerous papers contributed in no small degree to the advancement of science, more especially of chemistry. We mean Dr. Pearson.

“SIR HUMPHRY DAVY

Was born at Penzance, in Cornwall, on the 17th of December, 1778. Having received the rudiments of a classical education under Dr. Cardew of Truro, he was placed with a respectable professional gentleman of the name of Tonkin, at Penzance, in order that he might acquire a knowledge of the profession of a surgeon and apothecary. His master, however, soon became dissatisfied with his new pupil: instead of attending to the duties of the surgery, Humphry was rambling along the seashore, and often, like Demosthenes, declaiming against the wind and waves, in order to overcome a defect in his voice, which, although only slightly perceptible in his maturer age, was, when a boy, extremely discordant; instead of preparing the medicines for the doctor's patients, he was experimenting in the garret, and upon one occasion he produced an explosion that put the doctor and all his phials in jeopardy. At length a negotiation between the parents and the master commenced, with a view of releasing the parties from their engagement; and we believe that Humphry returned home. It is, however, but fair to state that he always entertained the highest respect for Mr. Tonkin, and never spoke of him but in terms of affectionate regard.

“We shall here pause in our narrative, for the purpose of introducing a

few anecdotes, which will serve not only to illustrate the early character of Davy, but to exhibit in their origin and growth several of those prominent peculiarities which distinguished him in after-life. That he was a boy of decision and courage may be inferred from the fact of his having, upon receiving a bite from a dog, taken his pocket-knife, and, without the least hesitation, cut out the part on the spot. The gentleman who related this anecdote observed, that he had frequently heard him declare his disbelief in the existence of pain, if the energies of the mind were directed to counteract it; but he added that he very shortly afterwards had an opportunity of witnessing a practical refutation of this doctrine, for, upon being bitten by a fish, Sir Humphry roared out most lustily!

"A French vessel having been wrecked near the Land's End, the surgeon became acquainted with young Davy, and, in return for some kind of services, presented him with his case of surgical instruments. The contents were eagerly turned out and examined; not, however, with any professional view of their utility, but in order to ascertain how far they might be convertible to philosophical purposes. The old-fashioned and clumsy clyster apparatus was viewed with exultation, and seized with avidity. What violent changes, what reverses, may not be suddenly effected by a simple accident! so says the moralist—behold an illustration: in the brief space of an hour did this long neglected and unobtrusive machine, emerging from its obscurity and insignificance, figure away in all the pomp and glory of a complicated piece of pneumatic apparatus. The most humble means may, undoubtedly, accomplish the highest objects,—the filament of a spider's web has been used to measure the motions of the stars; but that a worn-out clyster pipe should have thus furnished the first philosopher of the age with the only means of inquiry within his reach, certainly affords a whimsical illustration of the maxim. Nor can we pass over these circumstances without observing how materially they must have influenced the subsequent success of Davy as an experimentalist.

"The next prominent occurrence in Davy's life was his introduction to Mr. Davies Giddy, now Mr. Gilbert, the

present distinguished and popular President of the Royal Society. The manner in which this happened furnishes an additional instance of the power of mere accident in altering our destinies. Mr. Gilbert's attention was, from some trivial cause, attracted to the young chemist, as he was carelessly lounging over the gate of his father's house. A person in the company of Mr. Gilbert observed, that the boy in question was young Davy, who was much attached to chemistry. "To chemistry," said Mr. Gilbert; "if that be the case I must have some conversation with him." Mr. Gilbert, who, as is well known, possesses a strong perception of character, soon discovered ample proofs of genius in the youth; and liberally offered him the use of his library, or any other assistance that he might require, for the pursuit of his studies."

Davy, at the age of nineteen, was engaged by Dr. Beddoes to superintend his Pneumatic Institution, at Bristol; and, two years after, was appointed lecturer on chemistry at the Royal Institution, on the recommendation of Count Rumford.

"It would not be difficult to cite some personal anecdotes in order to show what an alteration was suddenly effected in the habits and manners of Davy by his elevation. But where is the man of twenty-two years of age to be found, unless the temperature of his blood be below zero, who could remain uninfluenced by such a change? Look at Davy in the laboratory at Bristol, pursuing with eager industry various abstract points of research; mixing only with a few philosophers, sanguine like himself in the investigation of chemical phenomena, but whose worldly knowledge was bounded by the walls of the institution in which they were engaged. Shift the scene—could the spells of an enchanter effect a more magical transformation? Behold him in the theatre of the Royal Institution! surrounded by an aristocracy of intellect, as well as of rank, by the flowers of genius, the *élite* of fashion, and the beauty of England,—whose very respirations were suspended in their eagerness to catch his novel and satisfactory elucidations of the mysteries of nature! We admit that his vanity was excited by such extraordinary demonstrations of devotion; that he lost that simplicity which constituted

the charm of his character, and assumed the garb and airs of a man of fashion;—is it wonderful if, under such circumstances, the robe should not have always fallen in graceful draperies? But the charms of the ball-room did not allure him from the pursuits of the laboratory. He had a capacity for both, and his devotions to Terpsichore did not interfere with the rites of Minerva. So popular did he become, under the auspices of the Duchess of Gordon, and other leaders of fashion, that their *soirées* were considered incomplete without his presence; and yet the crowds that repaired to the Institution in the morning were, day after day, gratified by newly devised and instructive experiments, performed with the utmost address, and explained in language at once the most intelligible and most eloquent."

It is not our intention to give even a sketch of Davy's discoveries; they are too well known to require it, nor would our limits admit of more than a mere catalogue; suffice it to say, that from this time he became acknowledged as the first chemist of the age, and published a succession of most valuable papers, as well as several extended works.

"Sir Humphry Davy was in every respect an accomplished scholar, and was well acquainted with foreign languages. He always retained a strong taste for literary pleasures; and his philosophical works are written in a perspicuous and popular style, by which means he has contributed more to the diffusion of scientific knowledge than any other writer of his time. His three principal works are, "Chemical and Philosophical Researches," "Elements of Chemical Philosophy," and "Elements of Agricultural Chemistry," and the two last are excellently adapted for elementary study. His numerous pamphlets and contributions to the Transactions of the Royal Society, have the same rare merit of conveying experimental knowledge in the most attractive form, and thus reducing abstract theory to the practice and purposes of life and society. The result of his investigations and experiments were not, ~~from~~ in the laboratory or they were made, mode of communicated, what ought of science, the condition and com-

forts of every class of his fellow-creatures. Thus, beautiful theories were illustrated by inventions of immediate utility, as in the *safety-lamp* for mitigating the dangers to which miners are exposed in their labors, and the application of a newly-discovered principle in preserving the life of the adventurous mariner. Yet splendid as were Sir Humphry's talents, and important as have been their application, he received the honors and homage of the scientific world with that becoming modesty, which universally characterizes great genius.

"Apart from the scientific value of Sir Humphry's labors and researches, they are pervaded by a tone and temper, and an enthusiastic love of nature, which are as admirably expressed as their influence is excellent. We trace no mixture of science and scepticism, and in vain shall we look for the spawn of infidel doctrine. The same excellent feeling breathes throughout "Salmonia, or Days of Fly-fishing," a volume published in 1828, and one of the most delightful labors of leisure ever seen. Not a few of the most beautiful phenomena of nature are here lucidly explained, yet the pages have none of the varnish of philosophical unbelief, or finite reasoning. The work is arranged in a series of conversations, and we are told in the preface, that 'these pages formed the occupation of the author during several months of severe and dangerous illness, when he was wholly incapable of attending to more useful studies, or of following more serious pursuits.'....

"The great philosopher closed his mortal career at Geneva. He had arrived in that city only the day before, namely, the 29th of May, 1829; having performed his journey from Rome by easy stages, without feeling any particular inconvenience, and without any circumstances which denoted so near an approach to the payment of the last debt of nature. During the night, however, he was attacked with apoplexy; and he expired at three o'clock on the morning of the 30th. Sir Humphry had been for some time a resident at Rome, where he had had a serious and alarming attack of a paralytic nature, but from which he was apparently, though slowly, recovering; although his most sanguine friends hardly ventured to hope that his valuable life would be much longer preserved."

MEDICAL GAZETTE.

Saturday, January 23, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo venendi in publicum sit, dicendi periculum non recuso."—CICERO.

REMUNERATION OF GENERAL PRACTITIONERS.

WE have this week to call the attention of our readers to one of the most important decisions, as concerns our profession, which has ever occurred in a court of law. The facts are simply these:—Mr. Henson, an attorney, in Stamford-street, employed Mr. Handey, a general practitioner, to attend his family—first his child, afterwards his wife, and lastly his mother-in-law. In the bill which was rendered, Mr. Handey charged for his attendance on Mrs. Henson—which, by the way, had lasted above five weeks—the moderate sum of five guineas, and this was the part of his demand which was objected to. Mr. Handey then brought an action against Mr. Henson in the Court of King's Bench—the defendant resisting payment on the ground that the actual amount for medicines, at the usual rate, would not amount to above half the sum charged—the remainder being for visits which were not proved to have been made; independently of which, it was held that the plaintiff had no right to charge for his attendance separately from his medicines. The manner of making out the bill, it is to be observed, consisted, not in charging for medicines a certain sum, and for visits a certain sum, but for medicines which were separately specified, and visits which were dated—the whole, *en masse*, 5l. 5s.

As to the visits, Mr. Dixon, the apprentice of Mr. Handey, swore that either he himself or the plaintiff entered them in a book regularly on their being made; and this was held by Lord Tenterden as sufficient proof of such visits

having actually taken place—as all the proof, in short, that could reasonably be expected. With regard to the second, and by far the most important part of the question, *he held that a general practitioner, who did not send useless quantities of medicine, was entitled to remuneration for his attendance.* The jury accordingly found for the plaintiff, with costs and damages to the full amount of the bill rendered.

To this most important decision we earnestly call the attention of the general practitioner. The construction which has heretofore been put upon the law has compelled him, in order to secure a fair remuneration for his time and talents, to prescribe a certain quantity of medicine for the benefit of his patient—and about three times more for his own. It is true that there are exceptions to this, and we know some who are in the habit of ordering what they think really necessary, and no more, while they charge for these at such a rate as virtually, though not nominally, to include a fee for the attendance; but this can only be done under particular circumstances—for those who adopt this method are constantly meeting with patients who are dissatisfied with it; and were such a bill to be disputed, the practitioner would not, we presume, recover in a court of law. Suppose, for example, a bill were laid before a jury containing the item *three pills, 5s. 6d.*; probably the demand would be regarded as extravagant; but if sixpence were charged for the pills and five shillings for the visit, it would appear perfectly reasonable. Again, then, we return to the fact established by this cause—that the general practitioner, being entitled to remuneration *for his visits*, is no longer obliged—is no longer warranted—in drenching his patient with useless draughts; but is now authorized to charge for his skill and labor as well as for his drugs. The man of liberal edu-

cation and cultivated mind will no longer feel degraded by the reflection that though he may study medicine as a science, he must practise it as a trade. Hereafter he is placed very much in the situation of that profession, one of the members of which (thanks to his unintended kindness) resisted the just demand of Mr. Handey; he is legally empowered to charge the value of the medicines sent, just as the attorney does the actual amount of any sum expended for his client, and, in addition, to demand a fair remuneration for his time and knowledge—as the attorney, or the barrister, for his professional opinion.

It behoves all general practitioners to look to this. It is no less their interest than we are sure it will, with most, be their pride, to break through the degrading custom which ancient habits, and the by-gone interpretation of the law, imposed upon them—of proportioning the quantity of medicine which they ordered, not to the wants of the patient, but to the number of visits and degree of attendance that they required, as the only means of securing a fair compensation for their trouble. The act of 1815, and the improved and improving scale of education that general practitioners are required to possess, have done much to raise them in public estimation; it needs but one step more, and it is within their easy reach:—Let them discard the trade and adopt the profession; let us no more see the windows of a professional man disfigured with red and green bottles, to catch the eye of the passenger; let us no more see “prescriptions carefully prepared,” or (still worse) “ginger beer and soda water powders,” hung up, on printed placards, as in a pastry-cook’s *. Let this, or any thing approaching to it, be scouted, as bringing discredit on the general body;—let no one be ac-

knowledge as respectable who attempts to unite the business of the retail chemist with that of the medical practitioner;—let the example of Mr. Handey be followed of sending only such medicines as are really required, while payment for visits is demanded and enforced, and more will be accomplished for the honor and interest of the profession, than all the frothy declamation that ever has been or ever will be penned on the subject of reform. This would be indeed a “reform;”—not such as disappointed and half frantic demagogues have raved about till the very word became a scorn, but a real and substantial reformation, honorable to the profession, advantageous to the public, and beneficial to science.

MEETINGS AT THE COLLEGE OF PHYSICIANS.

THE evening meetings at the College of Physicians are to recommence on the 8th of February, and to be continued regularly on the alternate Mondays, until the end of June.

It is probable that a paper of the learned President’s will be read on the first evening.

SURGICAL PRIZE.

On Wednesday, the 13th instant, an examination took place in the Anatomical Theatre at Guy’s Hospital, for the purpose of awarding the prize in surgery; when, after a highly creditable examination, which lasted nearly two hours, it was adjudged to Mr. Morley. The subject selected by Mr. Key, for the present year, was the “Accidents, Diseases, and Pathology of Joints.” The questions put were such as tried the candidate’s knowledge, both in the practical and theoretical departments of surgery; and the answers given fully evinced Mr. Morley’s clear views of the subjects on which he was examined, as well as the practical information he had acquired. It would be injustice to the successful candidate not to mention the satisfaction which the result of the examination gave, both to the examiner and to the large assemblage of his fellow pupils who witnessed it.

* This, we acknowledge, is far from common; but still it is done, and may be seen in the centre of this metropolis.

WESTMINSTER MEDICAL SOCIETY.

Saturday, Jan. 16th.

Professor Thomson on the Salts of Lead.

DR. THOMSON stated, that in the absence of more important matter, he took the opportunity of mentioning to the society that he had lately been investigating the nature of the salts of lead; and the result of his inquiries had enabled him to form an opinion, which he believed to be correct, that none of the salts of lead, with the exception of the carbonate, are poisonous. He had formed this opinion from his researches into the history of the cases of poisoning by lead, on record, and the chemical examination of the salts themselves, as well as on his experience of the effects of the acetate of lead when exhibited as a remedy. He admitted that deleterious effects had resulted from the administration of the acetate and subacetate, but in all these cases he referred the mischief to the conversion of these salts into the carbonate. It will be found, he remarked, that where one case has been recorded of poisoning by the acetates, twenty are to be found in which the carbonate is the poisoning agent. Few are aware of the great facility with which both the acetates and the oxides are converted into the carbonate; and this facility is partly proved by the action of distilled water on metallic lead, which had been demonstrated in a masterly manner by Dr. Christison, in his recent work on Toxology. To prove that the acetate in itself is not poisonous, he might mention an instance that had lately fallen under his observation, in which upwards of a drachm of the salt had been swallowed by mistake without any injurious consequences; and in several cases of hæmoptisis, in which he had recently given the acetate, the doses were double those usually given; but by administering vinegar and water at the same time as the acetate, he had prevented the decomposition of the salt, and no bad effects followed its use.

These conclusions, said Dr. Thomson, may seem at variance with the ordinary effects of poisons, which are more active in proportion to their solubility; but as the salts of lead act on the nervous energy without entering the circu-

lation, this seeming discordance was of little weight. He considered the investigation, and the results to which it had led, to be of great practical importance, inasmuch as it gave us a powerful remedy in hæmorrhages, completely under our control, unrestrained by the fears which had hitherto prevented it from being prescribed in efficient doses. He was willing to admit that many accidents had resulted from the internal exhibition of the subacetate; but this fact added weight to his opinion, inasmuch as it is that preparation of lead which is most easily converted into the carbonate. After detailing several experiments, he concluded by asserting the fact that none of the salts of lead are in themselves poisonous; and that they become so in proportion to the facility with which they are converted into the carbonate.

Some discussion followed, turning principally upon painters' colic, and the extent to which the acetate of lead might be given, not only with impunity, but with advantage.

Some incidental remarks were also made on salivation; which led a gentleman to state, that when it was accompanied by much swelling of the tongue, very great relief was afforded by rubbing the parts over with a smooth piece of sulphate of copper.

MEDICO-BOTANICAL SOCIETY.

EARL STANHOPE IN THE CHAIR.

THE anniversary meeting of this Society took place last Saturday, in Sackville-Street, when, after the usual election of officers, it was moved, and unanimously carried, "that the office of Director was unnecessary and inexpedient." After which, Dr. Sigmond proceeded to move, as a necessary consequence, that the office should not be filled up. At this moment Mr. Frost, the Ex-Director, entered, and a most extraordinary scene forthwith ensued. Mr. Frost demanding to be heard, was told that a motion was before the Chair, and that he must speak to it, if he spoke at all then; but that, when it was disposed of, he would be heard. Mr. Frost, however, persisted—was called to order—began again—was stopped once more—and this struggle continued

for a great length of time, producing a scene which baffles all description, and which was probably never witnessed before in any scientific institution. Dr. Sigmond at length withdrew his motion, and the Chairman gave notice that he had charges to bring forward against Mr. Frost, which he wished that gentleman to hear, that he might have an opportunity of replying to them. But Mr. Frost seemed rather suddenly to have changed his mind, and, after having shewn an extraordinary degree of violence in his determination to be heard, precipitately left the meeting when the motion before it had been withdrawn, for the purpose of going into his own personal concerns. The following extract from the *Morning Herald*, where the proceedings are extremely well reported, will give some idea of the closing part of the scene, and affords a curious illustration of the powers exercised by the Director, as well as to some transactions concerning the office of President, to which we alluded last week. We apprehend, however, that as the Society is not a chartered body, it may experience considerable difficulty in recovering its property, some of which is of considerable value.

“Earl Stanhope said he should now bring forward those statements which he had desired to make in Mr. Frost’s presence; but he would not be deterred by Mr. F.’s absence from preferring his charges. His Lordship then went into long statements of demands of books, papers, a medal, gold chain, &c. which were not complied with—appealing to Capt. Hughes as to the truth of his narrative—[Capt. H. confirmed the statement of the Noble Lord, and went into the particulars of the transaction.] His Lordship then adverted to various occurrences in which, he said, Mr. Frost had misled him; amongst others, his having stated that Sir Henry Hallford had objected to a proposition for inviting the Noble Earl to attend meetings at the College of Physicians. Nothing could be more completely without foundation than that statement. He next adverted to the meeting held at noon that day at the Crown and Anchor, and the advertisement by which it was called, saying that it was an imposition upon the public to represent that assemblage as a general meeting of the “Medico-Botanical Society.” There remained one topic, however, of more importance than any to which he had before alluded, and respecting which he felt it necessary to go a little more into detail. It was a most extraordinary plot, as extraordinary a plot as I ever heard of, said his Lordship.—(Hear.) The member who has just left the room held

a situation, as probably you all know, in the household of the Duke of Cumberland. I should not mention the Royal Duke’s name had not the matters in question been made the subject of discussion in the public papers. For myself, I think it necessary to premise that I never had the slightest communication with his Royal Highness upon this subject, with any member of his august family, or with any person whatever enjoying their confidence or intimacy, till the 5th of January, when I received a visit from the Rev. Mr. Jelf, who is, as no doubt you are aware, in the household of the Royal Duke (Prince George’s tutor). That gentleman was the bearer of a letter from his Royal Highness, authorising him to explain to me the circumstances of an application made respecting the Presidency of this Society, and conveying an assurance that, had his Royal Highness been aware that I held my present situation, he would never have allowed his name to be put upon the list. I, of course, lost not a moment in assuring Mr. Jelf, that if his Royal Highness would consent to honor the Society by becoming its President, nothing would be further from my wishes or intentions than to offer myself as a candidate to continue in that situation; but that as yet the chair was not vacant, I still being the President. I learned, in this interview with Mr. Jelf, and from other sources, that Mr. Frost applied to his Royal Highness the Duke of Cumberland to accept the office of President of this Society. In reply, his Royal Highness said, that though feeling a warm interest in the promotion of science, yet, as he was not a scientific man, he did not conceive himself a fit person to be put in nomination for the office of President; and that, besides, the pressure of other business did not leave him sufficient time to devote to the business of the Society. To this Mr. Frost replied, that it would not at all encroach upon the time of his Royal Highness; that all he would have to do would be to sign a few papers once a year, and appoint Vice-Presidents; for that he (Mr. Frost) would take all the business off his hands. Still that illustrious personage was unwilling to undertake the duties of the office, which, by your favor, I now unworthily hold. Mr. Frost was still nothing daunted; he addressed to his Royal Highness a long letter of four folio pages, pressing upon his attention every topic which could induce him to consent. He assured his Royal Highness that it was the wish of all the members that he should be offered the Presidency, and enclosed a resolution, under the seal of the Society, to that effect—(Hear, hear); and added, that the late Duke of York had filled the office of President; which was not the fact. At length the Royal Duke began to think that it would be ungracious to persist in his refusal, and he was induced to give a reluctant consent. Thereupon Mr. Frost

waited on him with three papers, and obtained his signature to them; one accepting the office of President, another appointing him (Mr. Frost) Vice-President, in conjunction with others, who were well known to be men not likely to attend—(Hear, hear). This was followed by an application to his Majesty for his approval of the acceptance of this office by his Royal brother, an approval that, as a matter of course, was immediately granted. By some means or other, which I can very sincerely assure you I have no knowledge of, the circular, so well known in this Society, was sent down to Windsor, from which became known to the Royal Duke the whole of Mr. Frost's conduct, and that his own acts were about to become the subject of investigation by the Society. The Duke of Cumberland sent for him, but, however ready to wait on him before, Mr. Frost now begged to be excused. Previous to the Meeting here, at which Mr. Jelf attended, I gave that gentleman a list of the members of this Society, and assured him, that if his Royal Highness the Duke of Cumberland could be prevailed on to accept the office of President, I should be the last man in the world to stand in his way. Mr. Jelf came to that Meeting, saw Mr. Frost, and told him, that, if he did not immediately give up the papers to which he had obtained the Duke of Cumberland's signature, he (Mr. Jelf) would lay the whole transaction before the Meeting. He also got from Mr. Frost the paper obtained from Windsor. The situation in which we now stand is this: Mr. Frost has the possession of all our books, &c. and refuses to give them up; what measures we may find it necessary to adopt in this emergency will be for future consideration. The Noble Lord adverted to several other topics, and concluded by saying, that it was Mr. Frost's own act that he was not there to answer the charges made against him. How far Mr. Frost had the "good of the Society" and the "interests of science" at heart, he would leave them to determine. His Lordship mentioned that amongst other compliments heretofore paid to him by Mr. Frost was to name a plant after him: it was called the "*Stanhopea insignis*"—(a laugh); but it was found to be an old plant, and one that was well known to botanists.—(Much laughter, which was continued by the introduction of the said *Stanhopea insignis* in a glass of spirits about 18 inches high.)

On the same day a meeting convened by Mr. Frost, and at which he presided, was held at the Crown and Anchor Tavern, when he entered into a very elaborate explanation of his conduct, justifying his withholding the property of the Society, on the plea of there being a rebellion, "and what, he asked, would

be thought of those who put arms into the hands of the rebels?" He stated that Earl Stanhope had been ejected from the office of President, and his Royal Highness the Duke of Cumberland elected in his place, with the express concurrence of his Majesty; but we did not learn that Mr. Frost mentioned the steps taken by his Royal Highness, on the circumstances under which he had been elected, or rather nominated, to the President's chair, being explained to him.

The absurdity of these proceedings, and the awkward dilemma in which the Society is placed with regard to the books, &c. &c. in Mr. Frost's possession, ought to be a lesson to other scientific institutions not to place too much power in the hands of any individual officer.

HOSPITAL REPORTS.

MEATH HOSPITAL, DUBLIN.

Tracheotomy in Cynanche Laryngea.

[Miles Brady's case continued from page 414.]

DEC. 13.—There has been no alteration since last report worth remarking except that he has suffered severely from occasional paroxysms of dyspnoea, which he attributes to a partial closure of the wound in the neck; the dilatation of it with a common forceps appears to relieve him. The opening in the trachea is evidently larger than the rima glottidis; the odour from the wound is excessively foetid; there is very little expectoration; the stethoscope indicates no disease in the lungs, and the emphysema has disappeared since the 9th day. On closing the wound, the patient can speak in a hoarse rauca! tone; but the passage of air through the natural opening must be very trifling, as he cannot endure the closure for a moment.

On this day Mr. Porter endeavoured to introduce a catheter from the wound upwards through the larynx; in doing which he had once before succeeded in breaking an abscess, but in this instance the instrument could not pass, and when withdrawn its extremity was deeply stained with sulphuretted hydrogen. He lies very tranquil except during the paroxysms; his pulse is 84; complexion moderately florid; he has lost flesh, but not to a remarkable extent.

15th.—Emaciation greatly increased; there is a small circumscribed red spot over each cheek-bone. Pulse 96; appetite moderately good; perspired a little last night; and was prevented from sleeping by frequent coughing: expectoration increased and

fœtid. Yesterday evening he attempted to swallow some fluid, and it passed out through the wound.

16th.—The patient nearly as yesterday, except that his sufferings from dyspnœa are increased. He speaks distinctly, but with an effort; cannot bear to trust to respiration by the natural passage; every fluid he attempts to swallow escapes through the wound.

20th.—A silver canula, of large caliber, was introduced through the wound yesterday, and remains there; the breathing is generally easy, but the paroxysms of dyspnœa still occur. The stethoscope cannot discover any disease in the lungs, but perhaps we ought not to place perfect reliance on it where there is artificial respiration kept up. Emaciation is very great, and accompanied with excessive debility; his head, breast, and shoulders are bedewed with perspiration when he sleeps, and the cough distresses him. All the fluid he swallows passes through the wound; expectoration is diminished in quantity.

22d.—Appears much improved; part of the fluids hold their natural course, but the greater quantity runs out through the wound; he can swallow solids, and his appetite is good. Pulse 48, very small, and feeble. The canula was withdrawn, and a larger one, fully three-eighths or an inch in diameter, inserted in its place. His respiration is tranquil, and he lies easy. He coughed up a portion of the larynx, apparently the arytenoid cartilage, with its corniculum attached, through the wound yesterday; it has an earthy appearance, and not unlike an exfoliation from a bone.

28th.—He is vastly improved; and were it not for the artificial respiration, one might suppose he was in perfect health. His complexion is clear; his countenance expressive of perfect tranquillity, and freedom from suffering. His appetite is improving, and he is refreshed by sleep. The paroxysms of dyspnœa no longer trouble him, but he cannot breathe through the natural passage for a moment. Fluids still pass through the wound; the purulent expectoration and fœtor have nearly disappeared, and he can speak, but in a hoarse, rough tone.

EDINBURGH ROYAL INFIRMARY.

Amaurosis successfully treated by the external application of Strychnine.

CASE I.—Wm. Watson, æt. 31, admitted under Mr. Liston, Nov. 23; is a cabinet-maker, but has, for some time past, been chiefly employed in polishing inlaid brass, by candle-light.

For the last three months has been affected with pain at the upper and posterior part

of the neck, extending along the right side of the head to the temple. Since the commencement of the pain, his vision has gradually diminished, and is now very much impaired. He is unable to see near objects, distinguishes those at a distance very imperfectly, and can with difficulty direct his steps. The pupils are sensible, and of their natural appearance.

24th.—A blister, of the size of a crown-piece, was applied to each temple, and his bowels were opened freely with aloetic pills.

25th.—The blisters were removed, and the elevated cuticle along with the subjacent effusion having been scraped off, a quarter of a grain of strychnine was applied to each raw surface.

26th.—He thinks that his vision has improved, being able to distinguish distant objects more accurately, though they still appear very obscure.

R Mur. Hydrargyri gr. j.

Ext. Guiaci 3j. M

Fiat massa, et divide in pil. xvi. sum. unam ter indies.

28th.—Upwards of gr. $\frac{1}{4}$ of strychnine was applied yesterday, and he now declares his sight to be completely restored, being able to read the smallest print with ease and accuracy. The blistered surface has become dry, and partially cicatrized.

Rep. vesicat. temp.

29th.—Gr. $\frac{1}{2}$ was applied; he continues to take the muriate of mercury pills, which have not affected his mouth; bowels regular.

30th.—He states that his vision is now as perfect as ever; no head-ache; bowels regular.

Omit. omnia.

On 5th Dec. a smart attack of erysipelas of the face supervened; antimonials were administered, and the parts were freely punctured, and afterwards fomented, with immediate relief, and abatement of the symptoms.

On the 20th Dec. he was dismissed, enjoying perfect vision.

CASE II.—Peter Hamilton, æt. 22, admitted under the care of Dr. Short, June 16th.

About two years ago, after daily exposure for some months to the heat and intense light of an iron-founder's furnace, he became affected with considerable indistinctness of vision, attended with frequent and instantaneous perceptions of vivid flashes, especially whilst stooping. The affection gradually increased during the next fifteen months, till at length he could merely distinguish light from darkness.

When admitted his pupils were natural, and his health unimpaired.

After each temple had been blistered, gr. $\frac{1}{2}$ of strychnine was applied, and was next

day succeeded by $\frac{1}{2}$, and on the third by gr. $\frac{1}{2}$, after which he could perceive the number of fingers held between him and the window. On the 25th the blisters having been repeated, and gr. $\frac{1}{2}$ applied, he could discern colors, especially with the left eye, the pupil of which appeared to be less sensible than that of the right. The strychnine was increased to gr. j. and on the 27th he distinguished printing from writing, but without being able to read either; and in a few days afterwards, having had gr. $\frac{1}{2}$ sprinkled on each temple, he told the hour on a watch during twilight. This increase in quantity of the strychnine having occasioned for some hours an attack of head-ache, vertigo, debility, and nausea, attended with tremors of the arms, its use was omitted for a few days, and then resumed at gr. $\frac{1}{4}$ daily.

Under a succession of 18 or 20 blisters, and the cautious increase of the strychnine to 3 grains, his improvement has continued progressive, so that he sees distinctly, particularly with his right eye, the color, size, &c. of objects even at a considerable distance.

GLASGOW ROYAL INFIRMARY.

Inflammatory Affections after Injuries and Operations.

THE occurrence of insidious attacks of inflammation after injuries and operations, producing deposits of lymph, or purulent matter, in different parts of the body, and copious sero-purulent effusion into the head, thorax, or abdomen, has of late years attracted much attention.

The existence of abscess in the liver, after injuries of the head, had been long known, but the frequency of the affection above alluded to, after amputations, was not fully impressed on the minds of the profession till the publication of Mr. Guthrie's work on Gun-shot Wounds, in 1815. In two cases, there narrated, after amputation of the upper extremity, which terminated fatally, a considerable quantity of pus was found in the cavity of the thorax, and other general marks of inflammation. "In these two cases, so insidious was the approach of this disease, that, except a difficulty of breathing, which supervened a few hours before death, there were no symptoms indicating the existence of such morbid affection. In both there was much febrile irritation, with occasional and severe rigors, but the entire absence of pain led to the belief that these were referrible to the formation of matter in or about the stump*." Other cases, and judicious remarks, are to be found in the work alluded to. Mr. Charles

Bell has narrated cases, proving pulmonary inflammation to be common after fractures, especially compound ones. Messrs. Rose and Velpeau have each a memoir on the subject, but it is to Mr. Guthrie we are indebted for the first distinct account of the disease.

It has been alleged that such inflammatory affections supervening on amputations, or compound fractures, depended on inflammation of the veins, and in many instances this has been proved by dissection; but, in the majority of cases, no inflammation of the veins could be discovered.

I have seen these affections occur after injuries, operations, during the existence of external ulcers, and, as the termination of common fever, suddenly cutting off the patient when his convalescence was supposed far advanced.

The very first case I treated in the Infirmary was one of purulent depôts, forming after a slight injury of the right hand, for which the patient was admitted, on November 2d, 1824, being five days after the injury. He had high fever, and slightly painful respiration. Pulse 96, strong. Being a muscular man, of a good constitution, he was bled twice, with considerable relief.

In a few days he became jaundiced, and was attacked by severe pain in the right hip and left elbow-joint, to which leeches were applied. Calomel and opium were given, from which the mouth became affected. He died on 17th; and on dissection, an abscess was found under the right pectoral muscle; another under the muscles of the neck on the left side, immediately above the clavicle, and a small collection by the side of the larynx. A considerable abscess behind the trochanter major of the right side close on the joint, but not communicating with it, and another round the back part of the left elbow, also external to the articulation. Several small deposits of matter were found in the substance of the muscles, near the elbow-joint. The viscera were sound, and the veins healthy. This case is one of purulent depôts, forming while there existed no internal disease; more commonly, however, there is, along with such external abscesses, inflammation of internal organs.

The following cases, which occurred during my present attendance, illustrate the symptoms and nature of these insidious affections.

I.—D. M'L. aged 21, dyer, was admitted on the 29th December, with a small fistula on right side of anus, not communicating with the gut. The fistula was cut on the 4th January. On the 6th he complained of griping pains. On the 7th he had a rigor, followed by severe pain in the back, extending to the testicles. He was feverish and uneasy. Pulse 90. Tongue whitish; thirst: urine high-colored. His bowels had been

* Guthrie on Gun-shot Wounds. 1815. p. 77.

opened by castor-oil, and a poultice applied to the wound. On the morning of the 10th, the feverish symptoms continuing, he was bled to ℥xvi . Blood buffy. Complains chiefly of pain in the testicles. Edges of the wound feel hard. Pulse 96. Bowels open. In the evening he had the hip bath, gr. vi. of calomel, and one of opium, which were followed by profuse perspiration, and great relief from pain.

11th.—Complains chiefly of weakness and thirst.

Pulv. Dover. gr. xii. Vespere.

13th.—Sickness and vomiting last night. Hip bath repeated this morning. Produced copious perspiration. A slight rigor during the forenoon. Pain of back, and in testicles. Abdomen slightly tympanitic, but not painful. Pulse 94. Tongue cleaner. Bowels slow. Had twelve leeches applied to the abdomen, and a purgative clyster.

On the 18th an abscess, which had formed on left hip, was punctured, and ℥iv . of pus evacuated. A healthy purulent discharge from the hip continued, but the feverish symptoms did not abate; and on the 21st another abscess, near the former, containing ℥ss . of matter, was opened. During the night he had some delirium, and next day complained of pain of abdomen, which was much distended and tympanitic. Countenance sunk, and pulse 120. Symptoms continued with little change till the 25th, when he had frequent cough, with expectoration, containing some blood. On examination by the stethoscope, the right lung was found to be consolidated. Had a blister to the breast, and antimonials. He sunk without any aggravation of symptoms, and died on the 28th.

Inspection.—The abscesses on the hip were much contracted, and contained no pus. The colon was generally distended with air, but the texture of that and of all the abdominal viscera was free from disease. The right lung was found adhering extensively to the sides of the thorax, and nearly the whole of this lung was changed in structure; it was mostly in a state of hepatization, but in some points was beginning to pass into that of purulent infiltration. The left lung was perfectly healthy.

This case is an interesting example of the insidious manner in which affections of the chest frequently succeed operations. No suspicion was entertained of any pulmonary disease till within three days of his death, when cough and puro-mucous expectoration were the first and only symptoms of chest affection; and previously, though often strictly questioned as to whether he had cough or uneasiness in the breast, he always maintained that he had not. Great hopes were entertained when the abscesses on the hip were opened, that a cessation of his fever would take place; and when this did not happen, suppuration within the pelvis, or peritoneal inflammation, was chiefly dreaded.

When the chest affection appeared it was too late to attempt its cure by venesection.

II.—Helen M. aged 18, March 18th, received a severe wound by machinery immediately above the elbow, by which the humeral artery was torn across, as also the superficial veins. The wound was dressed, and she had a purgative and opiate.

19th.—The hand is warm, but destitute of sensation, and pain is only felt in the wound. Head-ache; pulse 120, strong; tongue white; thirst.

V. S. B. ad ℥xvi . Haust. anodyn. vesp. et cras. sulph. magnes.

20th.—Became faintish after the bleeding, but felt relieved by it. Blood natural. Arm becoming tense and painful, bandages were cut last night, which produced relief. Temperature of both arms alike. Complains of head-ache and cough. Pulse 120. Tongue white; thirst; five stools.

Hirudines xviii. parti brachii dolent.

21st.—The arm becoming gangrenous, by the advice of a consultation was removed this evening, a little above the middle of the humerus, by the circular method.

22d.—Slept tolerably well; has head-ache and cough, but the respiration is free. Pulse 120; tongue white; thirst; no stool.

Statim Sulph. Magnes. ℥i . Ter Indie Calomel. gr. i. Op. gr. ss. Vesp. Tk. Op. gtts. xl.

25th.—Stump partially dressed yesterday and again to-day. It has not adhered. A slight rigor at 5 A.M. which has not been followed by any aggravation of symptoms. Pulse 120; tongue white and moist; one stool. Medicines omitted yesterday, and she had gr. iss. of opium at bed-time.

Rep. Op. h. s.

26th.—Another rigor at 8 last night. Says she is better to-day. Head-ache slight; stump discharges freely; pulse 108; tongue moist; one stool.

S. Opii, gr. ii. h. s.

27th.—Slept well; feels easier; less thirst, and some appetite; pulse 114.

29th.—Stump sloughy yesterday and to-day; was dressed with turpentine liniment. Complains chiefly of debility. Pulse 112, soft and full; tongue yellowish in the middle; bowels open.

31st.—Stump dressed yesterday. It was sloughy, and there was pain and considerable tumefaction around the shoulder-joint. Delirium, and within last half-hour hiccup. Pulse 124, jarring. The hiccup increased, with vomiting; she gradually sunk, and expired on the morning of the 1st April.

Inspection.—The surface of the stump had a dark-grey sloughy appearance; it was in no point united; and half an inch of the end of the bone was of a blackish color. The

cellular tissue connecting the brachial nerves was indurated, and of a dark-grey color, binding these parts firmly together. The veins, as high as the axillary, were partly filled with coagulum, and appeared thickened in their coats. The axillary vein was healthy, as also the brachial artery. In the shoulder-joint were found about \bar{z} ij. of purulent fluid. In both lungs were several indurated portions, the size of hazel-nuts, from the cut surfaces of which pus could be pressed. Several of these were situated immediately under the pleura, which was there of a dirty-yellow color. In both pleural cavities was a small quantity of effused serum. The peritoneum was highly vascular, and in several parts coated with coagulable lymph. Several ounces of sero-purulent fluid were found in the abdominal cavity.

III.—D. M. aged 14. blacksmith, admitted on the evening of April 16th, with a bad compound fracture of both bones of the right leg. The limb was dressed in the usual manner, and the bandages were not removed till the 21st, when the wound was found partially sloughy. It was dressed with the resinous ointment, and the bandages re-applied. It was again dressed on the 25th, when the wound was discharging, rather copiously, healthy pus. On the evening of the 24th he had a slight chilly fit, and next day he felt dull and heavy, and had slight cough. Pulse 130; tongue clean; thirst, with diminished appetite. From the very profuse discharge, being unwilling to bleed him, a purgative was given. On the evening of the 25th a distinct rigor, with delirium during its continuance. The wound on the 26th was healthy; his cough slight, but pulse 136; in the evening he had a rigor of five minutes' duration. On the 27th he was chilly, and complained of pain in his left leg. Is free of head-ache, cough, or pain of chest. Pulse 140, jarring; tongue moist. The state of the pulse determined me to bleed him, and I regretted not having done it sooner. Eight ounces were taken, cupped and buffy.

28th.—Slept ill. Pulse 120, but no rigor. Delirium during the night. Complaints of slight cough, and expectoration is tinged with blood. The discharge from the wound is to-day profuse and greenish colored.

Pector. emp. Vesicat. S. 4ta q. q. hora
Calomel. gr. iii. Op. gr. ss.

29th.—The blister rose well; he passed a better night. Less cough, and no expectoration. Profuse perspiration. Pulse 120.

Contin.

30th.—The wound discharges less; no change; pulse 140. Cont. med.

He had three rigors on the 1st May; his cough continued trifling; on the 3d he expired.

Inspection.—About \bar{z} vi. of purulent matter were found in the right knee-joint. The sa-

phena and femoral veins were carefully examined, and found healthy. The greater portion of the posterior lobe of both lungs was in a state of consolidation, and this was evidently of recent formation. The remaining part of the lungs was healthy, as were the brain and other viscera.

Other cases occurred both in my wards and those of my colleague, Dr. Couper, of the same nature, and with like fatal results. One patient with compound fracture, in whom the most unpromising symptoms, as rigor, cough, purulent-looking expectoration tinged with blood, took place, left the house, and, contrary to general expectation, survives. As to what effect the air of a crowded hospital may have in producing such inflammatory diseases, we are unable to give any opinion, or whether they are more frequent after secondary than primary amputation.

Glasgow Medical Journal.

SWEARING THE PEACE.

It is stated by Mr. Wakley, in the last number of his Journal, that in my account of the ridiculous affair with his reporter, I "intimate" that I was not afraid of that individual, while before the Magistrate I "swore" that I was. The latter part of this assertion is false. I stated that a threatening message had been sent to me, and my servant recognised Mr. M'Christie as the person by whom it was delivered. The Magistrate then asked, "Do you, sir, apprehend from this that a breach of the peace is intended?" to which I answered, "Certainly, such is my belief." This was all that was required.

R. MACLEOD.

Henrietta-Street, Jan. 18, 1850.

LITERARY INTELLIGENCE.

Preparing for publication, by John Marshall, Esq. Member of the Royal College of Surgeons—A Popular Summary of Vaccination, with reference to its Efficacy and probable Causes of Failure, as suggested by extensive Practical Experience.

BOOKS RECEIVED FOR REVIEW.

Clinical Illustrations of Fever, comprising a Report of the Cases treated at the London Hospital, 1828-9. By Alex. Tweedie, M.D. Member of the Royal College of Physicians, London; Physician to the Fever Hospital, &c. &c.

A Treatise on Poisons, in Relation to Medical Jurisprudence, Physiology, and the Practice of Physic. By Robert Christison, M.D. Professor of Medical Jurisprudence and Police in the University of Edinburgh, Fellow of the Royal Society, &c. &c.

W WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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Medicine and the Collateral Sciences.

SATURDAY, JANUARY 30, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XVIII.

*Sympathetic effects of Local Injuries—Rigors—
Tetanus, its Divisions, Symptoms, Pathology,
and Treatment.*

LOCAL injury, gentlemen, often produces an immediate sympathetic disturbance of the stomach, the heart, or the nervous system. Thus it happens that wounds are accompanied, in many instances, with nausea, sickness, and vomiting; with a state of depression of the pulse, proceeding even to syncope; with coldness and paleness; with agitation, anxiety, and alarm. Not uncommonly, such injuries are attended with rigors, and this is a circumstance which happens on other occasions, if a serious impression is made upon the animal economy; the commencement of local inflammation is very commonly ushered in with the same symptom, and it frequently attends the formation of matter. I do not know that we can explain very clearly the mode in which this particular symptom arises, or point out exactly that part of the system to which its occurrence is to be referred. It seems, however, that the muscular system is the part more immediately concerned in rigors.

A serious affection of the muscular system, under the name of *tetanus*, is observed as a remote consequence of local injury. The word *tetanus*, which is of Greek origin, means tension, or contraction. Tetanus may be defined to be a state of spasm, or permanent contraction of some part, or of the whole of the system of the voluntary muscles. When we say *permanent* contraction, this must be understood with some limitation. The state of the voluntary muscles in a patient laboring under tetanus is generally

that of spasm or continued contraction; but there are occasional paroxysms of convulsions, and occasionally partial intermissions in the contraction of the muscles, and during sleep they are in general pretty completely relaxed, so that we cannot say that the voluntary muscles are permanently contracted through the whole of the affection. The state, however, may be called permanent contraction, when it is compared with convulsive affections.

Tetanus may be either partial or general. When the muscles of the jaw alone are affected, the case is called *trismus*, or, in popular language, *locked jaw*; and this latter term (*locked jaw*) is used as a common phrase to denote tetanus in general, without meaning that the affection shall be confined to the muscles of the jaw. In common language, then, it is used as synonymous with *tetanus*, though strictly it is only applicable to cases where the muscles of the jaw are affected.

When the muscles of the back part of the trunk are affected, so that the trunk is drawn backwards, the case is called *opisthotonos*, a Greek word, which means a state of tension, with curvature of the trunk backwards. There is no case that can be designated by this term with strict propriety—there is no instance in which the tetanic affection is confined entirely to the muscles of the back part of the body. It happens that the muscles at the back are affected, and in the state of tetanus draw the body backwards—so far it is a case of *opisthotonos*. In other cases it is represented that the trunk is bent forward by the entire muscles, and this is called *emprosthotonos*. It is stated that the trunk may be incurvated to either side, the case being then termed *pleurosthotonos*. It is common enough in tetanus to see the state called *opisthotonos*; but I cannot say that it has ever occurred to me to see the trunk incurvated in a similar way, either forward or sideways; I therefore consider that the affections *emprosthotonos* and *pleurosthotonos*, are rather imaginary ones.

Tetanus is either *idiopathic*—that is, it is produced by internal causes, or seems to arise, in common language, spontaneously; or it is the result of a wound, in which case it is called *sympathetic* or *traumatic*. The progress of the affection differs in the degree of its rapidity in different instances; hence it is farther divided into *acute* and *chronic*. The truth is, that perhaps there are hardly any cases that deserve the name of chronic. Tetanus is less active in some cases than in others; but there is not the same distinction of acute and chronic, in tetanus, as there is in inflammation. All that we can say is, that some cases are rather less acute than others.

The consideration of *idiopathic* tetanus belongs to the physician. I have therefore only to speak of that form of the affection which occurs in consequence of a wound or injury.

Traumatic tetanus, as the name imports, derives its origin from the infliction of a wound; and it is observed to arise more particularly in consequence of wounds of the extremities, occurring very rarely, if at all, in consequence of wounds of the head, neck, or trunk of the body. It is produced more particularly in consequence of contused, lacerated, or punctured wounds; and it has been supposed to arise more especially from wounds that are attended with injury, such as division, laceration, or puncture of nerves. The truth is, that all wounds which take place in the soft parts of the body are accompanied with more or less injury of some nerves, so that you cannot have a wound in a soft part without that circumstance. I am not aware that there is any direct evidence to shew that injury of nerves is more likely to produce tetanus than wounds of the soft parts independently of such particular nerves. It has been stated that tetanus may arise from the nerves being included with arteries in ligatures after amputations, and other operations. I rather think this is a kind of imaginary consequence. It happens frequently that the nerves are tied with arteries in ligatures that are applied after operation; but the occurrence of tetanus, in these climes, after an operation, is very rare.

Tetanus will occur in all states or stages of a wound. It may happen when the wound is in an inflamed or in a sloughing state—it may also happen when the wound is going on very favorably towards healing, or when healing has considerably advanced. It is observed by Sir James M'Grigor, in an account he gave of the surgical history of the English army in the campaign of Spain and Portugal, that tetanus was observed to take place in consequence of all descriptions of wounds, both serious and trivial, as well incised as punctured, and lacerated; that it occurred in all the va-

rious stages of all such wounds; that it was not an immediate consequence of such injuries; that it came on some days after the occurrence of the wounds—often a considerable number of days afterwards. Perhaps from five to fifteen days may be stated as the ordinary limit. If the patient has no attack of this kind for the space of three weeks, that is, twenty-one or twenty-two days after the occurrence of the accident, he may be considered safe and free from all danger of tetanus. Tetanus occurs more frequently in hot climates than in those which are temperate; and in its idiopathic form it is quite uncommon in these climes, although it is very frequent in other quarters of the globe.

The affection in the first place shews itself in the muscles of the jaw, and those concerned in deglutition: the patient finds a stiffness in the movement of the jaw—he experiences uneasiness in swallowing, and soon finds that he has difficulty in separating the teeth for the admission of food into the mouth. About the same period a pain begins to be felt behind the sternum, and this pain extends from the pit of the stomach towards the vertebral column behind. The muscles at the back of the neck then begin to be affected with spasm, and subsequently those of the back generally. Then the muscles of the abdomen are affected, and the belly becomes as hard as a board; next the muscles of the limbs; and, lastly, those of the face. When the muscles of the face are affected with tetanic spasms, the features are drawn, independently of the will of the patient, into peculiar forms, and very frequently a kind of grin is produced by their action, which has been called by old writers *risus sardonicus*. It is a kind of movement of the features into the position they assume in grinning or laughing; but it is merely consequent on the spasmodic affections of the muscles of the face, so that there is the appearance of laughter independently of the state of mind that should accompany it. There is something very unpleasant in the effect produced under such circumstances.

I have mentioned that the state of the muscles affected in tetanus is generally that of spasm. Cullen calls this state of the muscles “spastic rigidity;” but there are frequent attacks of a convulsive nature, which are excessively painful to the patient. Indeed you can estimate the suffering he experiences under this affection, when you call to mind how severe a pain is experienced by a slight cramp of the muscles of the leg. The patient laboring under tetanus has *universal* cramp; the sufferings, therefore, are excessive. The affection of the muscles in any part in which it comes on is at first not the highest degree of contraction, but they become more and more rigid in proportion as the affection advances.

In the first instance, for example, the jaw is not immediately confined—the patient possesses some power of opening his mouth; but as the disease proceeds, the muscles of the jaw become so rigid that great difficulty is experienced in introducing food or medicine into the mouth, and sometimes it is necessary to take out a tooth, or teeth, to accomplish this purpose. The same may be observed with regard to the muscles of the neck and spine: when the spasm and tension are carried to the utmost degree, the trunk of the body is forcibly extended, and the body rests just upon the shoulders and pelvis, so that you can put your hand under the spine. The body is bent backwards in consequence of the superior power of the extensor muscles of the spine. Then the trunk is in the state of opisthotonos. Now the disease has arrived at the highest pitch. You have this state of permanent tension or spasmodic rigidity produced in the whole of the voluntary muscles of the trunk, of the abdomen, of the limbs, and those of the face—they are all in a state of rigid contraction, and the pain to the patient is excessive.

The *intellectual* functions are not impaired in tetanus.

It is stated by Cullen, that the natural functions—that is, those of the circulating, the respirative, and digestive organs—are unimpaired. This I consider to be a very erroneous representation. Cullen states that the pulse is not affected—that the blood exhibits no alteration in its character when it is drawn; or that if it be altered at all, it is rather less in its consistency. He mentions that the appetite is not impaired, and the functions of the digestive system generally are regularly performed. Now you will find that the pulse, particularly in young and robust persons laboring under tetanus, is full, strong, and accelerated, often rising from 100 to 120; or perhaps in the commencement of the affection, you will find that the blood drawn from the patient under such circumstances is buffed and cupped, instead of exhibiting that looseness of texture which Cullen speaks of. There is a loss of appetite, and a most obstinate costiveness; a circumstance inconsistent with the functions of the digestive organs being regularly performed; indeed the state of costiveness is a troublesome one, and in the treatment of the patient considerable difficulty is experienced in obviating this circumstance.

The *pathology* of tetanus is rather obscure. The spasm or the convulsion of the voluntary muscles leads us to inquire into the state of the spinal cord, from which the nerves supplying these muscles are derived. This has of late been attentively examined in many cases of tetanus, and some appearances of disease have frequently been described as found in it; but I cannot say that these

appearances are sufficiently clear or definite in their nature to lead to any satisfactory explanation upon the subject. In some instances small thin plates of osseous matter have been found in the arachnoid membrane of the spinal cord; but we can hardly suppose this to have been produced within the time in which tetanus has occurred. If any particular state of the spinal cord cause this affection, we should then wish to know how such disturbance of the spinal cord is produced. What is the circumstance which occasions the derangement in that part of the nervous system? Here we are at a loss—we are not able to point out with any degree of clearness the particular mode in which the derangement of the spinal cord, if it does take place, is effected; nor can we, as far as our examinations have hitherto gone, shew in any definite way a specific derangement of the part. It has been found that a state of costiveness precedes the development of tetanic symptoms; and Mr. Abernethy made this a particular subject of inquiry, and pointed out this question as one that should be borne in mind in a pathological view of the subject—that is to say, what is the condition of the digestive organs of the patient prior to the occurrence of the tetanic symptoms; between the receipt of the injury and the development of the disease? The feeling in my own mind is, that the injury in the first place produces derangement in the digestive organs; that the deranged condition of the digestive organs disturbs the spinal cord, and perhaps the rest of the nervous system; and that this disturbance produces that state of the muscular system which constitutes tetanus. This seems a rational and probable conjecture as to the mode in which the affection is produced. We must observe, however, that this point of pathology is by no means made out; so that the elucidation of the mode in which tetanus occurs, and the actual and direct nature of the disease, are points that remain for future inquiry.

The *prognosis* is always very serious in tetanus: it is much less so in idiopathic than in sympathetic tetanus. In many cases idiopathic tetanus is cured; but as it is our province to treat sympathetic tetanus—that which arises from wounds—it is to little purpose to enumerate the instances in which the idiopathic form of the disease has been cured; and we find that the means employed for it do not produce the same beneficial influence in cases of traumatic tetanus. The more *acute* the character of the affection is, the greater is the danger of the patient: the more *chronic* the character of the complaint, the greater chance there is that the patient will get over it. It was observed by Hippocrates, that if a patient survive four days of the disease, there is a much greater chance of his doing well. Dr. Parry states, that if the pulse does not rise above 100 by the

fourth day, there is a tolerably fair chance of recovery.

In the *treatment* of tetanus the first inquiry that presents itself is, that inasmuch as tetanic symptoms are the consequence of a local cause—that is, of a wound in some part or other, will the removal of the cause put a stop to the symptoms? In other words, will the amputation of any portion of the extremities—a finger, a thumb, or any other member, in a case where a certain condition of the wound has produced tetanus, arrest the symptoms, and put a stop to the complaint? I believe we may say pretty positively it will have no such effect. You have seen already that tetanus may occur when a wound is in a healthy state, and when it is making rapid progress to a cure. You cannot suppose that the removal of a healing wound will have the effect of putting a stop to a complaint like tetanus. No doubt tetanus owes its origin to some condition of the wound that has occurred prior to this healing state; there is, therefore, no reason to suppose that the particular state of the wound at the time when tetanus is developed is the cause of the affection—and consequently the removal of the wound would have no good effect. The occurrence of tetanus depends principally upon the state of health of the individual prior to the development of the symptoms. If it arise from the derangement of some particular system in the constitution, you cannot expect that the removal of the wound would have the effect of stopping the disorder; yet the removal of the wound, the amputation of the extremity in which it may be situated, has been proposed, even in late times, and by those whose authority is considered rather high in surgery; more particularly by Larrey, who recommends it in the surgical history he has given of his military campaigns. He however adds, that it is only proper in cases of *chronic* tetanus, or at the very commencement of the symptoms in those of a more acute kind. He does not give many cases on the subject, and I do not find that even those furnish any conclusive evidence on the point in question. The trial has been made in various instances, and the result goes completely to shew that the practice is a bad one—that there is no sufficient reason to induce one to recommend an operation under such circumstances.

In the treatment of tetanus, you find that very different modes of proceeding are recommended—modes of proceeding so different as to shew that hitherto no clear principle of treating it has been discovered. The state of spasm of the voluntary muscles has naturally led to the employment of anti-spasmodic remedies, and especially that most powerful one, opium; and we see generally that the treatment of tetanus turns on the exhibition of opium in large doses. Opium will not produce the same effect on a

patient laboring under tetanus as in a state of health, or as in other diseases. The disturbance which exists in the economy at the time renders the patient very unsusceptible of the operation of anti-spasmodics, so that, given in immense doses, they produce very little effect. Dr. Babington gave 180 grains of opium in eleven hours, and an ounce of tincture of opium in twenty-four hours. If you look at the cases of idiopathic tetanus, you find abundant instances in which the free use of opium has been said to cure the case; but it has not the same beneficial result in sympathetic tetanus.

Blood-letting has been resorted to in tetanus, particularly in the early stages. Patients have been bled largely, and, in many cases, the appearance of the blood, when drawn, seems to justify the affirmation that it is buffed and cupped; and this circumstance, in conjunction with the state of the pulse, certainly shews that blood-letting may perhaps be an useful auxiliary remedy, although, considered alone, it is not capable of accomplishing the purposes we have in view.

Mercury has been employed freely, so as to produce salivation. Large quantities of mercurial ointment have been rubbed in, so as to bring on salivation within a short time. This, however, fails of curing the affection; indeed there are some instances in which tetanus has come on when the patients were under salivation at the time.

The powerfully relaxing, or depressive effect which tobacco exercises over the nerves and the muscular system, has led to the employment of it in the form of clysters.

Musk, camphor, and ether, have been exhibited in large doses; in fact, all in such doses as are supposed to exert a power over the muscular and nervous system.

Bark, wine, tonics, and stimuli of all kinds, have been given very freely.

If we were, then, merely to look over the recorded cases of tetanus, observe the means that have been employed, and notice the effects that have taken place under the action of those means, we should feel totally at a loss for any principle to guide us in the treatment of this affection. It appears to me, that the most successful treatment of tetanus has been that of the employment of active aperients, in alternation with the exhibition of anti-spasmodics—particularly opium; and that those cases have done best in which powerful opening medicines have been administered from time to time, so as to affect the bowels and keep up an action on the alimentary canal, in order to remedy that state of costiveness which we find at the commencement of the disease, and to prevent its recurrence, and in which at the same time antispasmodics have been employed to mitigate the severity of the spasm. In many

instances a successful result has been procured by acting steadily on this plan. The three points of treatment, therefore, on which I place reliance myself, are, first, the employment of venesection in the early stage of the affection, until the symptoms of general fulness of the vascular system are removed; secondly, the free exhibition of aperient medicines, so as to remove the costiveness; and, thirdly, the employment of opium, for the purpose of lessening and controlling the very painful spasms.

About three or four years ago, I was called to a case of tetanus in a subject, and under circumstances where there was imminent danger, and where the plan of treatment that I have just mentioned was completely successful, although the case at first view seemed a very unpromising one. It was that of a gentleman about fifty years of age, a very robust man, of full habit, accustomed to free living; a man of very active turn of mind, and who had various and important business on his hands. He was pursuing his avocations in a very active way at the time he met with the accident that led to the attack of tetanus, which occurred in the very hottest time of the year. He was riding, and his horse fell and threw him. He was pitched forwards, and his face came on the ground, so that he grazed the dorsum of his nose. He was riding on a gravelly road, and some of the gravel scraped off the skin from his nose, so as to make a slight wound on it. That was the only actual wound that he received. He thought so little of the accident that he did not discontinue his ordinary pursuits, nor change his usual mode of living—which was rather free. I do not know that he did more than put a bit of brown paper on his nose, the wound of which had just gone through the skin, and was very slight. At the end of about ten days, when the wound seemed just on the point of getting well, on sitting down to the table, (having asked some friends to dine with him) he felt that he could not move his jaws very freely. He had some difficulty in masticating, and also some in swallowing his food. He was induced, by the importunity of his relations, rather than by his own feelings, to send for a medical person, who took a little blood from the arm, and gave him some opening medicine. He was worse the next day, and I was consequently sent for to see him. At this time the symptoms of tetanus were very manifest: spasmodic contraction of the muscles of the jaw—so much difficulty of deglutition that he could not swallow ordinary food—and pain behind the sternum, extending through to the spine. His pulse was very full and strong—his bowels tolerably open, he having been bled, and taken opening medicine the day before. I told him he must go to bed, for he was then sitting up. He was bled largely, and I prescribed some active

opening medicine for him. The blood taken, was found the following day to be buffed and cupped: the opening medicine had acted powerfully, and he was better. I prescribed a repetition of the venesection, and of the active aperients, being desirous of producing still further action on the alimentary canal. He took a pretty large dose of calomel and jalap, and that was followed up with a draft of the infusion of senna with salts. On this occasion, however, the medicine produced no effect. As he lived a few miles from town I did not see him, and the medical gentleman gave him a quantity of castor oil, which did not act; he then repeated the active aperient medicines, and likewise gave him a clyster. By the time I saw him—which was next day—these means had had no effect upon his bowels. The neck and back had begun to be affected; I therefore directed immediately the administration of croton oil. He took a single drop of this in a tea-spoon full of gruel. In an hour such an immense action was produced upon his bowels, and he discharged such a quantity of matter of various kinds as altogether astonished him and all those about him. His attendants seemed to be at a loss to describe the quantity. He filled the close stool pan so that it ran over. (A laugh.) The abundance of the evacuation that took place from the bowels was such as he himself had never before witnessed. This was followed by considerable relief of all the symptoms, but still the complaint went on. In fact, it proceeded to the full development of tetanus over the whole of the body. The treatment of the case from this time consisted in the regular administration every day of croton oil, so as to insure a free action upon the bowels. In the first instance a single drop produced this effect, but after some time it was necessary to give him a drop and a half. The evacuations that were produced by this medicine were very copious indeed, and it was observed by the medical gentleman in attendance that “we had got the secret in reference to tetanus.” The muscles that before were rigidly contracted became entirely relaxed. The patient experienced weakness from the bleeding, but acknowledged the full power he possessed over the action of the muscles. I need not detail the farther progress of the case; it is enough to say that the tetanic affection proceeded until all parts of the voluntary system were involved and were affected to as high a degree as I ever saw. This gentleman lay frequently for a great length of time, notwithstanding all the means of treatment, with his limbs in a most violent state of spasmodic rigidity, and then he had an attack of convulsions of the most severe and painful kind, so that although he was a man of strong mind and firm resolution, he could not help crying out under them. It was necessary in this case to exhibit opium, in order

to control these attacks of spasm. I think the particular benefit of anti-spasmodic treatment, and the free exhibition of powerful medicines in the early stage, was manifest in this instance. The aperient dose first, and afterwards the opium, were quite sufficient to control the spasm in this case, although in instances where opium has been trusted to alone, it has failed to produce this effect. A drachm of tincture of opium controlled the spasm, and would suspend the contraction of the muscles for four or six hours, when it was necessary to have recourse to the tincture of opium again, but not to go beyond a drachm. By giving a dose of this kind the great severity of the spasm was at all events obviated, and by the continuance of the two modes of treatment, the exhibition of croton oil and opium, the complaint gradually subsided, and this gentleman completely recovered. I may mention, that the urgency of the danger was so considerable, that some medical persons, who were consulted in the progress of the case, and whose judgments are considered the highest authority, viewed it as completely hopeless. This, therefore, is the plan that I should have recourse to on a future occasion in treating a case of this kind.

Scalds and Burns.

The application of *heat* to the human body will produce, according to its degree, either slight or more considerable inflammation, with vesicles and other consequences, or complete disorganization of the part. The injury that is produced by the application of *hot water* to the body is denominated *scald*; and the effect that can be produced here is limited, because the temperature of boiling water cannot exceed 212 degrees. The transient application of hot water to the body will produce vesicular inflammation of the skin, effusion of serum upon the inflamed surface, and the elevation of the cuticle into a vesicle by that effusion. If hot water be applied for a long time it will produce considerable inflammation of the skin. If the inflammation be intense, that part of the skin mortifies and presents a slough. The slough is produced just in the same way as mortification occurs from inflammation under other circumstances, when it is carried beyond a certain point. Heat applied to the body in other forms completely decomposes the part to which it is applied, and reduces it to a dry brown charred substance, which becomes corrugated and shrivelled.

The important points for consideration, therefore, are the *degree* and the *extent* of injury in these cases. The *degree* of injury—that is, the degree of heat that is applied to the texture of the body. The *extent* of the injury—that is, the quantity of surface which is involved in the application.

The *prognosis* turns chiefly on the extent of

the injury. If the degree of injury be slight, but occupy a large surface of the body, it will produce very serious effects; while the highest degree of injury, if it be confined to a small point, is of no very great consequence. The nature of the inflammatory process—that is, the inflammation itself—the suppuration, the ulceration, and granulation, which are its consequences, and the mode of managing or treating these states, are just the same in point of principle as when the inflammation is produced in any other way.

I should mention to you, in reference to the actual decomposition—the shrivelling up of a part of the body by powerful heat, that the portion which is thus deprived of life is generally called technically *Eschar*. Now the word *eschar* is derived from the Greek. *Eschar*, in Greek, means that part of the altar on which the sacrifices were offered, where the fire had been kindled, and consequently it was charred and discolored by the application of fire. Hence a portion of the body discolored and burnt by fire, came to be called *eschar*. The word *slough* denotes a portion of the body which has lost its vitality in consequence of the change, which is termed gangrene, or mortification; a loss of vitality in a part of the body consequent upon previous vital action. *Eschar* is the loss of vitality, either in consequence of the application of heat, or some other direct chemical injury. That is the pure application of the two terms, though they are sometimes used indiscriminately.

Now when a considerable degree of heat is applied to a large surface of the body, the disturbance immediately excited by the injury is fatal within a short period of time. If you consider how serious a degree of local uneasiness, and how much febrile disturbance is often produced even by a boil, where the inflammation is confined to some point of the skin, you will not be surprised that the patient should die quickly if nearly the whole of the skin be seriously burnt. In cases where the injury is less considerable in point of extent, a sympathetic disturbance of the respiratory organs on the stomach is produced; breathing is carried on very imperfectly; it is laborious and defective; the pulse becomes irregular; coldness and shivering are produced; there is the most oppressive thirst, and the patient sinks in the course of a few days in consequence of this affection. Where the symptoms are not such as to endanger life, there may be serious injury produced on the parts that are burnt. Hence deformity may ensue, or the office of the part may be considerably impaired. Subsequent deformity and impeded motion may frequently take place in burns where the life is not in any danger.

In the *treatment* of burns, so far as the local injury goes, two apparently opposite plans of treatment are frequently had recourse to.

In the first place, when the injury is slight and superficial, we apply cold. If the heat has been applied to a part of the body so as to produce inflammation of the skin, without vesicles or any other material consequence, the application of cold will perhaps check the progress of the inflammation, prevent the occurrence of vesicles, and occasion a speedy dispersion of the inflammation. Cold water, saturnine lotion, vinegar and water, and ice may be applied for this purpose. Sometimes it has been proposed to employ spirits or ether with water to produce the cold in a more considerable degree. A scraped potatoe is a popular mode of applying cold in cases of this kind. If these applications become inconvenient, if the patient feels chilliness and uneasiness from their continued presence, they must of course be discontinued: you must then employ other means. If vesicles have taken place, or ulceration is likely to follow, you may apply a soft poultice to the part; or a common application to burns is the *linimentum ex aqua calcis*, a mixture of lime water and olive oil; it makes a soft application, which keeps the part in a comfortable state. It is often a question whether it would be expedient to open the vesicles or to leave them untouched. This is a point of little consequence. If you put a stop to inflammation of the skin, it does not signify whether you leave the vesicles untouched or open them. If the inflammation of the skin goes on, and ulceration is produced, the opening of the vesicles is of no particular advantage.

Now in many very serious cases of burn, there is a very considerable depression of the powers of the system. The pulse sinks and becomes feeble; there is a coldness and faintness, and shivering. A state is produced in which the application of cold is quite out of the question. Nobody would think of applying cold to a patient in a state in which he is often found after a very serious burn; that would be the way to extinguish the feeble remains of vitality to a certainty: Here the state of the system is the main object of your attention, rather than the condition of the part. If you have a slight superficial burn, you will adopt the local treatment already described; that is then the point to be attended to. But when you have got an injury in the state I have now described, your main object must be to attend to the general symptoms. In such a state, the treatment introduced by Mr. Kentish is the most applicable. He proposes his method on an analogy between what should be done in cases where extreme heat has been applied to the body, and the course of proceeding that you adopt where the body has suffered by the excessive application of cold. I have had occasion to mention that where a part is frost bitten, it is wrong suddenly to apply a considerable heat, but that you must restore the

temperature of the body gradually. Mr. Kentish says, in the same way, that where a part is excited by heat you should gradually lessen that excitement, till you bring it down to its proper state. Whether this reasoning be applicable it is not worth while to argue;—we know the treatment he adopted to have been very successful. You must bathe the part affected with warm oil of turpentine, and then cover it with cloths dipped in turpentine and yellow basilicon. This is a kind of stimulating plan of treatment. In conjunction with these local means, recourse must be had to the administration of opium in moderate doses, in order to alleviate the excessive pain attendant on burns. The administration of a little wine and water, or brandy and water, in order to remedy the symptoms of depressed circulation, accords very well with the local plan of treatment. This is the mode proposed by Mr. Kentish in cases of extensive burn, and he had great opportunities of seeing this in the worst forms, having practised near coal mines, where extensive injuries of this sort are of frequent occurrence.

In the subsequent treatment of these extensive burns, the application of turpentine linament is continued until ulceration and suppuration commence, and then other simple and milder applications are proper. You treat the case on the principles that have been already detailed. You apply soft poultices to the part, and when granulation commences, you proceed according to the treatment applicable to ulcers. Of course you are not to continue the internal stimuli beyond the existence of those circumstances that immediately require them. You would not think of continuing to give a patient, after a dangerous injury of this kind, opium, brandy, and wine; but as soon as the state of depression that called for these remedies was past, you would discontinue their employment.

Now the general treatment in cases of burn will differ very considerably, because the circumstances of these accidents differ. Sometimes the inflammation, produced by the operation of heat on the body, causes considerable general excitement, instead of the state of depression that I have just mentioned. It is then necessary to take blood from the arm, and to employ other active anti-phlogistic means. Frequently a state of excitement comes on in scalds, about the time when ulceration and suppuration are beginning. I remember not long ago having in this hospital two instances of men who had scalded the lower extremities extensively, in both of whom, when matter began to be discharged from the surface of the wounds, there were violent febrile attacks of the system. It was necessary to bleed largely and repeatedly in the progress of these cases towards a cure. When

ulceration commences, and when the parts that have lost their vitality are separated, you will find that the completion of the cure ;—the cicatrization takes place with a very different degree of rapidity in different instances. It sometimes happens, particularly in scalds, that merely the external stratum of the skin loses its vitality, and is separated, or sloughs, but the sloughing process does not extend through its whole thickness. There is only a partial destruction of the external surface of the cutis under such circumstances. The ulcer which is left after the detachment of the superficial slough is in fact in the cuticular texture, and as soon as the slough is detached, you will find that almost immediately the surface of such a sore will cicatrize all over. In fact, this is not like an ordinary ulcer, which heals by degrees from the edge of the skin : the whole of the skin is ulcerated, and it is liable to cicatrization ; and you see an ulcer of great extent, nearly the size of the palm of the hand,* thus cicatrized in twenty-four hours. In those instances in which all the depth of the skin is detached, so that the loose cellular membrane that lies under is exposed, you find that large granulations are produced ; they rise above the level of the skin, and great difficulty is experienced in keeping them down and effecting the cicatrization. I do not know any case that is more tedious, in this respect, than burns of this kind. It is necessary that you should pay particular attention to the position of the affected part, in many instances of burns. You will recollect that the granulations which are produced in the healing of a sore, become absorbed after the cicatrization has been accomplished ; then the parts contract ; and consequently, when any part of the body is burnt where there is a bend—as at a joint, you will find, if you allow the limb to remain in the bent position, that this contraction of the granulations will unite the two parts in such a way as to fix them permanently in that situation ; and thus they produce, not only a degree of deformity, but a very serious diminution in the motions of the joint afterwards. If you were to allow the forearm and arm to continue bent while the two surfaces were healing, you would find them united together to a very great extent. Thus you would have a sort of bridle produced in the cicatrix, keeping the limb in the same posture. The most serious and dreadful deformity and incurvatures are in this way produced ;—under all such circumstances, therefore, a very close attention to the position of the part, during the time the granulating and cicatrizing processes are going on, is absolutely necessary. In instances where this point has been neglected, and where contraction has arisen in consequence of this bridle of the cicatrix being produced, relief has been

produced by dissecting out the portion that forms the bridle. When the skin on each side is sound, so that it can be brought together after the cicatrix has been removed, the use of the part has been restored. We are indebted, for the principle of this mode of treating contractions remaining after burns, to my respected colleague, Mr. Earle. He first drew attention to it ; and in many instances he has succeeded in removing very extensive and serious deformities and contractions by that simple mode of proceeding.

There are two methods of treating burns which have been lately proposed, but which I have not had myself an opportunity of trying. They have, however, been proposed on such respectable authority, that I think them worthy of your notice, and I should myself be inclined to give them a trial. The one is what we should not very readily have thought of, as applicable to a burnt surface—raw cotton. It was first thought of in America. A child had been very extensively burnt, and there were no means at hand for the regular treatment of the case. In order to put the child out of the way, he was laid in a basket of cotton, and it was found soon after, that the pain of the burn had been diminished, and the child became quiet. In fact, they took the hint—the child was covered over with the cotton, the pain went off, and, although the burn was considerable, the case did well, and in a short time the child perfectly recovered. This has led to the practice of covering over the part with raw cotton. When discharge commences, the cotton that thus covers the burn becomes caked over, and forms a kind of case. If the discharge seems to be oozing forth, this case may be removed, and fresh cotton applied ; and by keeping it covered for a short time, the parts heal under this case of cotton, and no further treatment or dressing is required. I believe in some instances in which this plan has been tried in this country, it has been found to do very well.

Another plan is that of covering the parts copiously with simple flour : taking a flour-dredger, and dusting the parts over with flour till they are covered with a thick stratum ;—then laying a soft rag over it, covering it with flour, in the way you would proceed with the cotton. This has been stated to be a very advantageous mode of treating burns in many cases, but of it I have not any immediate experience.

Effects of various Chemical Agents—Escharotica.

There are various chemical substances which produce the effect of decomposing that part of the body to which they are applied. The effects of these are well known to medical men. Ammonia, potass, lime, nitrate of silver, muriate of mercury,

tartrate of antimony—all these are sometimes employed by surgeons as escharotics—that is, they make an eschar; they decompose the part, or operate in the way of converting it into a brown or dry-looking matter. They all agree in depriving the part to which they are applied of life; though they do this, in each instance, in a peculiar way—that is, the appearance of the part, after the action of the substance, differs in each particular case. The action of lime is peculiar in some respects. Lime, when applied to the cornea of the eye, completely destroys the transparency of the part, and reduces it into a fine powder. The particular effect of nitrate of silver, when applied to a part of the body where there is a discharge, it is well known produces a whitish film on the surface. The truth is, that nitrate of silver is decomposed whenever it comes in contact with any discharge. Muriate of silver is formed, which constitutes the white pellicle after the nitrate of silver is rubbed on the surface of an ulcer.

OBSERVATIONS

ON

CERTAIN LOCAL NERVOUS AFFECTIONS.

By B. C. BRODIE, F.R.S.

As delivered by him in his Surgical Lectures.

A MIDDLE-AGED lady, who had been exposed during a considerable period of time to the operation of causes of great mental anxiety, complained of a constant and severe pain, which she referred to a spot, about three or four inches in diameter, in the situation of the false ribs of the left side. Besides this she was subject to fits, apparently connected with hysteria, and was otherwise in a very impaired state of health. Under these circumstances she died, and on examining the body after death, particular attention was paid to the side to which the pain had been referred. No morbid appearances could be detected in it: there was neither inflammation, nor thickening, nor adhesion, nor any morbid change of structure, nor the slightest deviation of any kind from the natural condition of the part.

Now such a case as this is by no means uncommon. It is only one of many which might be adduced in proof of this proposition, namely, that the

natural sensations of a part may be increased, diminished, or otherwise perverted, although no disease exists in it which our senses are able to detect either before or after death.

There are other cases which may be regarded as corresponding to those to which I have just alluded, except that the nerves of motion are affected instead of those of sensation. Here there is an involuntary contraction or spasm of a particular set of muscles, or certain muscles lose their power of action altogether, and become paralytic; and yet if an opportunity occurs of examining the parts after death, the most minute dissection can demonstrate nothing in them different from what there would have been if the spasm or paralysis never had existed.

Nor are these facts of difficult explanation. Every part to which a nervous filament can be traced, may be said to have its corresponding point in the brain or spinal marrow, and an impression made either at its origin or any where in the course of the trunk of a nerve, will produce effects which are rendered manifest where the nerve terminates, at that extremity of it which is most distant from the brain.

These local nervous affections are of very frequent occurrence. In one shape or another you will meet with them at every turn of your future practice, and a knowledge of them is of the greatest importance both to the physician and surgeon. Without it, you will be continually mistaking the real seat of a disease: your attention will be directed to a wrong object, and following the symptoms, you will be in danger of overlooking the cause on which they depend. The investigation, however, is not unattended with difficulty, and it will often require all your professional sagacity and skill to trace the phenomena, which occur in these cases, to their true origin.

If you accidentally strike the inside of your elbow against a projecting body, the corner of a table for example, you feel a peculiar tingling sensation, not where the blow is inflicted, but where the ulnar nerve, which has been struck, terminates, in the inside of the hand, and especially in the little finger. In like manner an accidental pressure made for a few minutes on the popliteal or sciatic nerve, will cause that peculiar tingling sensation in the foot which is

commonly described by saying that the foot is asleep, and which continues for some time after the pressure is taken away. Guided by the light of these facts, and of others analogous to them, the first question which you will ask yourselves when you are consulted in these cases will be—whether there is any cause of irritation affecting the trunk of the nerve above, sufficient to account for the symptoms which are met with in the part, to which its ultimate fibres are distributed?

A man was admitted into St. George's Hospital in the year 1808, complaining of a severe pain in the inside of his knee. The joint was carefully examined, but no marks of disease could be detected in it. In the thigh, however, there was an aneurism of the femoral artery, of the size of a small orange. This last disease had scarcely attracted the patient's notice. He said that he should be very well if it were not for the pain in the knee, and it was not until some trouble had been taken to explain to him the nature of his case, that he could be made to understand that the tumor was of any importance. Soon after the man's admission Sir Everard Home (then Mr. Home) applied a ligature round the femoral artery, in the upper part of the thigh. On the instant of the artery being secured, the tumor ceased to pulsate, and the pain in the knee ceased also. Some untoward circumstances occurred, and the patient died about four or five days after the operation was performed. On inspecting the limb after death, the aneurism was found reduced to one-half of its former size; some branches of the anterior crural nerve, which passed over it, and which must have been kept on the stretch previous to the operation, were found to terminate in the part to which the pain had been referred, on the inside of the knee; and thus the cause of the pain was sufficiently explained. It was, in fact, a nervous pain, existing where there was no disease, in consequence of pressure on the nerves above.

A gentleman in the year 1816 began to suffer from a gnawing pain in the left leg, referred to the course of the peroneal nerve from the foot to the knee. The pain by degrees became very severe, occupying at the same time a larger portion of the limb. The limb itself presented no appearance of dis-

ease. The patient consulted various surgeons, myself among the number. The disease went by the name of neuralgia, but the cause of it could not be discovered, and the remedies recommended were of no avail. After having lost sight of him for a considerable time, I was again sent for to see him in the year 1824. He was now dying with dropsy of the belly, and anasarca of the lower limbs. On examining the abdomen it was observed, as the fluid, which it contained, receded under the pressure of the hand, that a large solid tumor was perceptible, attached to the left side of the lumbar vertebræ, and extending into the pelvis. It was evident that this tumor must have pressed on the origin of the sciatic nerve, and thus it afforded a sufficient explanation of the pain which for so many years had been referred to some of its branches.

A case analogous to this is recorded by Dr. Denmark, in one of the volumes of the Medico-Chirurgical Transactions. A sailor received a wound from a musket ball in the arm; the wound healed, but the patient complained of an agonizing pain, beginning in the extremities of the thumb and fingers (except the little one), and extending up the fore-arm. His sufferings were such that he willingly submitted to the amputation of the limb, and the operation gave him complete relief. On dissecting the amputated limb, a small portion of lead, which seemed to have been detached from the ball when it had struck against the bone, was found imbedded in the fibres of the median nerve.

In each of these cases the cause of irritation was detected in the trunk of the nerve belonging to the part to which the symptoms were referred. But similar effects are produced where the actual seat of the disease is in that more essential part of the nervous system in which the nerve itself originates; that is, in the brain or spinal marrow. Thus caries of the dorsal vertebræ irritating the spinal marrow, produces pains and muscular spasms of the lower limbs; and the same disease affecting the superior cervical vertebræ, produces corresponding symptoms in the upper limbs.

A gentleman complained of severe pains referred to one side of the abdomen. After having been fixed for some time in one situation, it attacked another. No disease could be detected

in the part apparently affected, and the pains were therefore regarded as nervous. It was observed at the same time that his powers of articulation were affected, and that he spoke in an indistinct and drawling manner. This seemed to indicate that there was some disease in the brain, and the suspicion was confirmed soon afterwards by the occurrence of epileptic fits, from which the patient continued to suffer during the few remaining years of his life.

I mention this case because I believe that a particular example will serve to impress the fact, which it illustrates, on your minds better than a mere general observation, and not because there is any thing in it in any way remarkable or singular. You will, indeed, when engaged in practice, find nothing more common than this; that a patient consults you, who labours under some disease in the brain, but in whom a particular symptom, referred perhaps to a distant part of the body, is so severe, or so distressing, that he regards this as the original disease; and it is only after a diligent cross-examination that you are enabled to detect the existence of those other symptoms which serve to explain the real nature of the case. In many of these cases the cause of irritation seems to operate always on the same part of the sensorium, and there is little or no variety in the local indications by which it is rendered manifest. At other times it has no determined seat: it may affect at first one portion of the brain, to which a certain function belongs, and then it may affect another portion, whose function is entirely different, and the symptoms vary accordingly.

A gentleman laboured under an agonizing pain, referred to the left side of the face; to which those whom he consulted gave the name of *tic douloureux*. While under the influence of this pain he was suddenly seized with a pain in the calf of the left leg, having precisely the same peculiar character with that which he had before experienced in the face. When the pain in the leg attacked him, that in the face did not subside altogether, but it abated so much that he suffered little or no inconvenience from it. At the end of a few days, as the pain left the leg, it returned with its usual severity in the face.

A lady became affected with a spasmodic affection of the sterno-cleido-mastoideus muscle, producing what is

commonly called a spasmodic wry-neck. This symptom continued unabated for a year, and then suddenly left her; but as the spasm in the muscle ceased, she fell into a state of mental depression amounting to insanity; and in this she continued during the whole of the second year. At the end of this period she recovered of the disordered condition of her mind, and the spasm of the muscle returned, continuing from that period up to the time of my being consulted, three or four years afterwards. I was consulted by another lady, in whom a neuralgic affection of the spine alternated with insanity.

When a calculus passes along the ureter from the kidney into the bladder, it frequently occasions a severe pain in the testicle of the same side. The most probable explanation of this sympathetic affection of the testicle is as follows: many of the nerves of the testicle derive their origin from the renal plexus, which also supplies the kidney, and which is formed by branches of the great sympathetic nerve. The irritating cause, namely, the calculus, operates in the first instance on the nerves of the kidney, through which its influence is transmitted to the renal plexus; and from thence it is, as it were, reflected to the nerves of the testicle.

The symptoms which occurred in the following case may be accounted for on the same principle. A gentleman laboured under a scrofulous disease of the hip, producing caries of the bones and suppuration within the joint. The following symptoms existed in addition to those which the same disease usually produces. The smallest motion of the thigh induced an attack of excruciating pain, amounting to agony, attended with violent spasmodic contraction of the muscles which move the thigh. The limb was jerked in a most remarkable manner for several minutes, and the volition of the patient had no controul over these distressing and extraordinary movements. Combined with the disease of the hip-joint, there were scrofulous tubercles and abscesses of the lungs; and of this last complaint the patient died. Having obtained permission to examine the body, I did not fail to dissect the diseased joint, and the parts connected with it, with the greatest care. Besides the usual appearances, I found two lymphatic glands, enlarged to the size of a large walnut,

immediately beneath the skin on the anterior and outer part of the thigh, and below the outer extremity of Paupart's ligament. It so happened that two considerable branches of the lumbar nerves lay on the surface of these enlarged glands, so as to be kept stretched and tense, in the same manner as the strings of a violin are stretched over the bridge of the instrument. These nerves had the same origin with those which supply the muscles on the anterior part of the thigh; and the peculiar circumstances, under which they were placed, seemed to afford a sufficient explanation of the symptoms under which the patient laboured.

In cases similar to that which I have just mentioned, where nerves have a common origin, it is easy to suppose that an impression made upon one nerve should be communicated to those parts which are supplied by the other. But an impression made on one part of the body will often produce a nervous affection elsewhere, at a distance from the original seat of the disease, and where no such obvious explanation of the fact presents itself. A disease in the liver produces a pain in the right shoulder; a disease in the heart produces a pain in the back.

A gentleman awoke in the middle of the night, labouring under a severe pain in one foot; at the same time that some other sensations, to which he was not unaccustomed, indicated the existence of an unusual quantity of acid in the stomach. To relieve the latter he swallowed a large dose of an alkaline medicine. Immediately on the acid in the stomach having been thus neutralized, the pain in the foot left him.

The late Dr. Wollaston was accustomed to relate the following history. He ate some ice-cream after dinner, which his stomach seemed to be incapable of digesting. Some time afterwards, when he had left the dinner-table to go to the drawing-room, he found himself lame from a violent pain in one ankle. Suddenly he became sick; the ice-cream was rejected from the stomach; and this was followed by an instantaneous relief of the pain in the foot.

A gentleman consulted me concerning a pain in one instep. The pain was severe, causing lameness, so that he walked with difficulty; but there was neither swelling, nor, except the pain, any mark of inflammation. I

prescribed some remedies, which, however, were of no avail. One morning he called on me, still suffering from the pain in the foot, and so lame that he could not get out of his carriage and walk into the house without the assistance of his servant. Now, however, he complained of another symptom: he had a difficulty of making water, and a purulent discharge from the urethra. He had laboured under a stricture of the urethra for many years, and had occasionally used bougies. Of late the stricture had caused more inconvenience than usual; but he had abstained from mentioning it, thinking that it would be better that he should (if possible) be relieved of the pain in the foot before any treatment was adopted on account of the stricture. Under these circumstances I introduced a bougie, which penetrated the stricture and entered the bladder. Immediately on the bougie having been used, the pain in the foot abated; and in less than a quarter of an hour he left the house free from pain, and walking without the slightest difficulty. This happened some years ago, but I have seen the patient at intervals ever since; and from a most careful observation of his case, he and I are both satisfied that the pain in the foot is connected with the disease in the urethra, and we have never found any thing to relieve it except the introduction of the bougie.

A lady consulted me concerning a pain to which she had been for some time subject, beginning in the left ankle, and extending along the instep towards the little toe, and also into the sole of the foot. The pain was described as being very severe. It was unattended by swelling or redness of the skin, but the foot was tender. She laboured also under internal piles, which protruded externally when she was at the water-closet, at the same time that she lost from them sometimes a larger and sometimes a smaller quantity of blood. On a more particular inquiry, I learned that she was free from pain in the foot in the morning; that the pain attacked her as soon as the first evacuation of the bowels had occasioned a protrusion of the piles; that it was especially induced by an evacuation of hard fæces; and that if she passed a day without any evacuation at all the pain in the foot never troubled her. Having taken all these facts into consideration, I prescribed for her the daily

use of a lavement of cold water; that she should take the Ward's paste (*confectio piperis composita*) three times daily, and some lenitive electuary at bed-time. After having persevered in this plan for the space of six weeks, she called on me again. The piles had now ceased to bleed, and in other respects gave her scarcely any inconvenience. The pain in the foot had entirely left her. She observed that, in proportion as the symptoms produced by the piles had abated, the pain in the foot had abated also.

Now in such cases as these, you will at once perceive that there is no direct communication between the nerves of the parts affected that will afford a reasonable explanation of the occurrence of the sympathetic pain; and you will naturally enquire, how then is the sympathetic pain produced? To this question I would answer, that in all probability it is in the brain itself that the communication is made, the impression being first transmitted to the sensorium, and from thence reflected to the nerves of the part which is secondarily affected. If you dissect the brain according to Reil's method, having first hardened it by maceration in alcohol, you will find it splitting into fibres, passing in various directions, many of which may be demonstrated as connecting even the most distant convolutions of the cerebrum with each other: and if, with the limited knowledge which we at present possess, we venture to speculate on this obscure but interesting subject, we may easily be led to suppose that an impression on one part of the body should, by means of these communicating fibres, produce a disordered sensation in another part. It is not more difficult to believe that this may happen than that the whole fabric of the nervous system should sympathize with an affection of a particular nerve, as happens in cases of traumatic tetanus; and on many other occasions of which the experience of surgeons will furnish numerous instances. I shall mention here one remarkable example of the kind which fell under my own observation. An officer in the army received a wound (in action) from a musket-ball in the leg. The wound healed, but the ball remained lodged in the flesh, in some deep-seated situation where it could not be felt externally, and giving the patient no inconvenience. After some time the ball changed its place, so that it became

perceptible to the touch; but in its new position it occasioned symptoms such as had never existed previously. There were convulsive twitches of the muscles of the limb, occurring at irregular periods, and sometimes followed by a fit, in which there were general convulsions, as in epilepsy. At this time (if I may judge from the patient's own account) the ball might have been readily extracted. Unfortunately the opportunity was neglected, and soon afterwards the ball again shifted its place. Probably it went back to the situation which it had originally occupied; at any rate the spasms of the muscles were relieved, and there was no recurrence of the epileptic fits. I presume that these latter symptoms were the consequence of the ball, when it had left its original position, pressing on some nervous filament in such a manner as that a peculiar irritation was excited in it, and transmitted to the brain.

As these nervous affections may occur under such different circumstances, and may arise from such different causes, you will not be surprised to find that they assume a great variety of characters, so that it is impossible for me to do more than give you a general notion of what you will observe respecting them in the course of your professional practice; your own experience will enable you hereafter to supply the deficiencies of my description.

One remarkable feature of these diseases, whether they present themselves in the form of nervous pains or muscular spasms, is that they seem to be suspended during sleep. A patient suffering from the pains of *tic douloureux* in the face, may, for a time, be prevented falling asleep, but if once asleep, his sleep is likely to be sound and uninterrupted for many hours. In like manner, when a patient is affected with the spasmodic wry neck, the muscle which is the seat of the spasm, probably the *sternocleido-mastoideus*, becomes relaxed, and remains so while sleep continues, perhaps during the whole night. I do not assert that there are absolutely no exceptions to this rule, but I am much mistaken if the exceptions are not comparatively rare. Even during his waking hours, the sufferings of the patient are seldom constant. Nervous pains especially are liable to irregular intermissions, occurring in paroxysms, and then either subsiding altogether, or

becoming very much abated. The time of such irregular intermissions varies from a few minutes to several hours, or even to several days. The patient then says that the pain comes on by spasms, and even medical men are apt to hold the same language. This, however, is not a very correct application of the term spasm. Spasm means contraction, and the use of it ought to be restricted to involuntary contractions of the muscles. In applying it to nervous pains as well as to muscular contractions, you confound together symptoms which, although they may arise from the same causes, are in themselves dissimilar, and you lead yourselves and others into error. Even where there is no absolute intermission, the intensity of the symptoms varies at different times, according to the state of the general health, the state of mind, and under the influence of external circumstances.

Nervous pains vary not only in degree but in kind. They are sometimes described as dull and wearying, at other times, and more frequently, as sharp, darting, or stabbing. A gentleman, who laboured under no other symptoms of disease, lost the sense of touch in one arm, and fore-arm and hand, so that the whole limb was benumbed, and in the place of the natural sensations, experienced a sense of heat and burning, recurring at irregular intervals. Nervous pains may, in the first instance, be readily distinguished from those produced by inflammation by the absence of throbbing, by their not being increased by pressure; by there being no evident turgescence of the small vessels. But there is more difficulty in the diagnosis afterwards. As the commonest event may prove a source of annoyance to an irritable mind, so will nerves, which have been kept for some time in a state of irritation, transmit every impression that is made on them to the brain, with a disagreeable or painful sensation superadded to it: in other words the part affected will be tender to the touch. And more than this: the tenderness may be followed by increased vascularity; by a slight degree of swelling; by actual inflammation. I do not mean to assert that any very active inflammation will be established, such as will end in suppuration and abscess, or ulcer; it will be moderate in degree, but it will be inflammation nevertheless,

and marked by the usual symptoms. In a patient, who had laboured for some time under pain in the testicle, depending on a calculus passing down the ureter into the bladder, the testicle became tender and considerably swollen. In a gentleman, who suffered for a great length of time with what was regarded as a most severe *tic douloureux* in the face, at first the parts to which the pain was referred retained their natural appearance, but ultimately they became swollen, from an effusion of serum into the cellular texture, and so exquisitely tender that they would not bear the slightest touch.

I have said that nervous pains are subject to irregular intermissions. But in some instances the intermissions are regular, and the returns of the pain are periodical, like those of an ague or intermitting fever. I have known such intermitting and periodical nervous pains to alternate with ague. In fact, the two diseases depend on the same state of the general system, and quinine, or arsenic, which would cure the intermitting fever, will also cure the intermitting pain. Here the character, which the pain assumes, leads to an important rule of practice; but in other cases, as far as my own experience has yet gone, it teaches us but little as to the origin of the disease, or the remedies by which it is to be cured. What I am now about to mention renders it probable that the kind of pain depends (at the least) as much on the particular structure of the part, to which it is referred, as on the particular cause which produces it. It has been stated by Sir Henry Hallford that the *tic douloureux* in the face arises from the irritation of the nerves, occasioned by a portion of dead or carious bone, and I have no doubt that it is so in some instances. I have seen one, if not two cases, which confirm Sir Henry Hallford's observation. But I also can entertain no doubt that it may arise from other causes. In one case, which I saw with Mr. Green and Mr. Freeman, the existence of epileptic fits, a ptosis of one eye-lid, and some other symptoms, led us to believe that the pain in the face was the consequence of some disease in the brain. The patient died, and the appearances on dissection afforded ample proof of the correctness of the opinion which we had been led to form during the patient's life-time. In other instances it appears to be

merely the consequence of a disordered condition of the digestive organs. But I am not aware that in these different cases there is any essential difference in the symptoms of the disease, or that it is possible for us, judging merely from the kind of pain, to pronounce that it arises from this or that cause, or that it is to be cured by this or that remedy.

Although there is no part of the body which may not at one time or another be the seat of these nervous affections, it would appear that some parts are more liable to them than others. They are met with less frequently in the viscera, which are supplied by the great sympathetic nerves, than in other parts. Nervous pains are more severe, and perhaps, on the whole, more common, in those parts which receive their nerves from the fifth pair, as the face, the eye, the tongue, than in any other individual part. Muscular spasms are common in the muscles of the neck, especially in the sterno-cleido-mastoideus. I am inclined to believe, also, that they occur more frequently in the upper limb than in the lower. It is not uncommon to see one hand and arm in a state of constant tremulous motion, there being no other indication of disease. I have seen several cases in which a muscular spasm of the upper limb has shewn itself in the following manner. The patient experiences no inconvenience from it until he uses the limb; for example, until he sits down to write. Then, when he has gone so far as to have written a few letters, some of the muscles act involuntarily, and jerk the hand in a direction contrary to that which was intended; so that instead of completing the word which was begun, the pen makes only a long scratch on the paper.

A lady complained of pain in the head, and her mouth was drawn to one side; and hence she was supposed to suffer from paralysis of the muscles of one side of the face. However, when I was consulted respecting her, I observed that there were nearly constant twitches of the cheek and eye-lids on that side to which the mouth was drawn; and on more minute examination, I was satisfied that the distortion of the mouth arose, not from the muscles on one side of the face being paralytic, but from those on the opposite side being in a state of spasm. The case precisely resembled that of a patient with spasmodic wry neck, except that the disease

influenced a different set of muscles, namely, those supplied by the facial nerve, or the portio dura of the seventh pair. Perhaps there are no muscles in the body which are, on the whole, more liable to have their actions deranged under the influence of nervous disorders, than those of the pharynx and œsophagus. In not a few of those cases which have been confounded together under the general appellation of stricture of the œsophagus, the disease is either a spasmodic, or a partial paralytic, affection of these parts, and the patient is to be cured, not by the introduction of bougies into the stomach, but by other means.

A lady consulted me concerning symptoms which were ascribed to a stricture of the œsophagus. She was unable to swallow the smallest morsel of solid food, so that she was compelled to subsist entirely on liquids, and even these she swallowed with great difficulty. These symptoms had been coming on for upwards of three years. I introduced a full-sized œsophagus bougie, which entered the stomach without meeting the slightest impediment. From this and other circumstances I was led to conclude that the difficulty of deglutition was merely a symptom of some other disease. The lady's face was bleached, as if she had suffered from repeated attacks of hæmorrhage, and her feet were in some degree œdematous. On inquiry I found that she had long laboured under internal piles, from which had taken place repeated discharges of blood. To this last disease, then, I directed my chief attention, prescribing two ounces of the infusion of catechu, with fifteen grains of alum, to be used cold, as a lavement, every morning; and at the same time a solution of the sulphate of iron, and sulphate of quinine, to be taken by the mouth. When this plan had been persevered in for three weeks the piles were much relieved; they no longer protruded externally; there had been no recurrence of hæmorrhage; her cheeks were less pale; and she swallowed with comparative facility. At the end of six weeks more the piles occasioned very little inconvenience; she had lost no more blood; her general health was much improved; and there was so little difficulty of deglutition that I had no hesitation in recommending that after her return to the country she

should swallow a bolus of Ward's paste three times daily, with a view to the complete cure of the hæmorrhoidal disease.

The pathological history of these local nervous affections constitutes in itself a most curious and interesting object of research; but it has another, and still stronger claim on your attention. Your patient wishes to be cured; he has of course no other reason for consulting you. Now you may supply yourselves with a list of what are called nervous remedies; prescribing, for example, the carbonate of iron first, changing this for the extract of belladonna, and that for something else; trusting that accident will at last enable you to hit on the right expedient; but you will do little good by the adoption of such a loose and empirical method of practice. If you would cure your patient, you must, in each individual case that comes before you, study the disease, if I may be allowed to use the expression, pathologically. Endeavour to trace the symptoms to their true origin; and if you can succeed in doing so, you will, in many instances, learn at the same time in what manner a cure is to be effected; while in others, in which the disease does not admit of a cure, you will learn this also; you will be enabled to avoid tormenting your patient with useless remedies; and at any rate you will be satisfied you can do as much for him as your neighbours.

It is not to be supposed that in these cases any permanent benefit can arise from applications made to the part to which the symptoms are referred, the cause on which they depend being elsewhere; and the first thing that you have to attend to in the treatment is, that you do not fall into the error of regarding the symptoms as constituting the original disease. A patient applies to you complaining of a pain in the testicle; but the testicle appears to have its natural structure, and (except the pain) bears no marks of inflammation. You enquire further, and find that the pain is not constant; that it is especially induced by exercise, and that it subsides when the patient is in the horizontal posture. Examine the groin after he has taken a long walk, and you will find an incipient hernia; a small portion of bowel is just attempting to protrude through the abdominal ring. You apply a truss, which sup-

ports the hernia, and cures the pain in the testicle. If you had been careless in your investigation of the case, and had applied leeches and lotions to the testicle, you would, to say the least of it, have plagued your patient to no purpose. Another person applies to you concerning a spasmodic wry neck. If you at once conclude that the disease is where it shews itself, and divide the tendon of the sterno-cleido-mastoideus muscle, what is the consequence? The patient undergoes a certain quantity of pain in the operation, and to no purpose; for before the wound is completely cicatrized, the divided tendon has again become fixed, by adhesion to the neighbouring textures, and the contraction of the muscle, and the twisting of the neck, are as bad as ever. I shall relate a case in which a patient underwent a severe and painful operation to no purpose, in consequence of such a want of discrimination on the part of the surgeon. A sailor had received a severe wound in the ham, I believe from a musket ball. The wound healed, but not until after a considerable time, and the patient was left with a contracted leg, and suffering from a most agonizing pain in the foot. This state of things having existed for a considerable time, and no benefit having been derived from any of the remedies employed, the poor fellow wished to lose the foot. The surgeon, under whose care he was, therefore, amputated the leg. But, unfortunately, he amputated it, not above the knee and above the injury of the nerve, but below the knee and below the injury. I scarcely need tell you the result. The pain continued as severe as ever, and it was not relieved until amputation was performed a second time higher up in the limb.

It is however reasonable to conclude, that few among you will be guilty of a mistake so palpable as this. But in many instances, as I have already expressed to you, the diagnosis is really difficult, and it will require a very minute observation, and much exercise of judgment, for you to understand the real nature of the case, so as to be enabled to determine where the primary disease is situated, and in what it consists. You must take into the account not only the present circumstances, but the former history; and your observations, instead of being limited to the particular symptoms concerning which

you are consulted, must extend to the state of the animal functions generally; and where more light is wanted, you must be satisfied to wait and watch the further progress of the disease, and the effects produced on it by the remedies employed.

If the original disease operates immediately on the nerves of the affected part, producing in it pain, or muscular spasm, or paralysis, you will have first to consider how far it is within the reach of topical remedies. If a tumor presses on a nerve, or if some foreign body, as a musket ball, or a piece of dead bone, irritates its surface, or is entangled in its substance, perhaps the tumor or the foreign body may be removed by a surgical operation, or the tumor may be reduced by other means. If this cannot be accomplished, or if the nerve itself be altered in structure, either from disease or injury, it will become a matter for consideration, whether the limb should be amputated, or whether the nerve should be divided. It is only under these circumstances that any advantage can be expected to arise from the division of the nerve. In ordinary cases of neuralgia, where the disease on which it depends is in the brain, or in some other distant part of the body, or where it is connected with some derangement of the general health, it is evident that such an operation cannot be recommended on any sound principle, and it need be a matter of no surprise that where it is performed it so generally fails. Where nothing better can be done, and a cure is not within your reach, a palliative treatment may be productive of some advantage, and you may endeavour to mitigate the patient's sufferings by the use of the local vapor bath, or by the application of the opium, or hemlock, or what is still better, the belladonna plaister.

In other cases the success of your practice must mainly depend on these circumstances, whether you are able to discover the primary seat of the disease, and whether, if it be discovered, it is of such a nature as to be under the influence of remedies. If you refer to what I have said in former parts of the present lecture, you will find that I have anticipated much of what belongs to this part of our inquiries. I shall not trouble you by needless repetitions. There is one point, however, on which I feel it my duty to make some addi-

tional remarks. The mucous membrane of the stomach and intestines presents a very extended surface, on which a multitude of nervous filaments are distributed, maintaining an extensive sympathy between these organs and the rest of the system. This membrane is subject to various causes of irritation, to which nervous affections shewing themselves even in distant parts of the body, may not unfrequently be traced. Hence it is that these diseases are in some instances relieved or cured by an adherence to a well-regulated diet, by the exhibition of purgatives, of what are called alterative medicines, and of others which tend to improve the disordered secretions of the stomach and liver. Probably the carbonate of iron, which some have recommended to be given in these cases, acts (where it acts at all) on the same principle. Even where two or three drachms of the carbonate are swallowed daily, we cannot suppose that more than a very few grains really enter into the circulation. The great mass of it must remain (and indeed we know that it does remain) in the alimentary canal, blended with the fæces, and voided with them; and in the present state of our knowledge, it seems difficult to comprehend how it can produce any effect on the system generally, except through the medium of its mechanical operation on the internal surface of the intestine.

In those cases in which the local nervous affection depends on an organic disease of the brain, or spinal marrow, it is evident that the patient has no chance of actual cure. Other nervous symptoms shew themselves in succession, such as a stumbling walk, a drawing speech, epileptic fits, derangement of the intellect, and at last a stroke of apoplexy occurs as the immediate prelude of death. But here months or years may elapse before the disease reaches its fatal termination; and in the meantime you attain an important end, if you can relieve the local symptoms. Now where these shew themselves in the form of muscular spasms or paralysis, according to my experience, remedies are of little avail. The spasms may subside spontaneously, but they are not to be relieved by art. It is different, however, with respect to nervous pains; and for these, local applications of hemlock or belladonna, stimulating liniments combined with laudanum, and even blisters,

may be employed with advantage, removing the pain, perhaps for a time, perhaps permanently, although the disease on which the pain depends is slowly but progressively advancing.

[The above was followed by some observations on local affections connected with Hysteria, which we hope to lay before our readers on a future occasion.]

HÆMORRHAGE FROM SLOUGHING ULCERS IN THE THROAT.

To the Editor of the London Medical Gazette.

SIR,

IN a late number of the Gazette you published a very interesting case, in which the common carotid artery was tied by Mr. Luke for the suppression of a dangerous hæmorrhage from the throat, and in the London Medical and Physical Journal for Dec. last, Mr. Mayo published a case in which the patient was apparently rescued from death by a similar operation. I trust that it will not be supposed that I wish in any way to detract from the merit of these successful operations, in requesting you to give publicity to the following cases, in which most alarming hæmorrhages were suppressed without having recourse to the ligature.

Wm. Stennett was admitted into Lazarus's ward, Oct. 9th, 1829, in a very debilitated state, with a large sloughing ulcer occupying the whole of the back of the fauces, and extending to the edges of the soft palate and uvula. He stated that at the latter end of April he was affected with an ulcer on the inner membrane of the prepuce, near its junction with the corona glandis. The sore was not excavated, but notwithstanding was very red and hard at its base. He took some mercury, and the sore skinned over without his mouth being affected. About the end of July a bubo appeared in each groin, which suppurated and burst spontaneously. On the 27th of Sept. his throat became sore, and gradually got worse until he was admitted into the hospital. At this time there was an open sinus in the groin; the cicatrix of the original sore was hardened; and, in addition to his sore throat, there were several dark-colored tubercular eruptions on his

forehead. He was in so weak a state that mercury was not at first resorted to. He was ordered a very strong preparation of the red Jamaica sarsaparilla three times a day, and the throat was painted over with the linimentum æruginis. He was also directed frequently to wash the throat by throwing a stream of water from an elastic gum-bottle upon the ulcer, while he held his mouth open over a basin—a simple plan of cleansing a throat, which I have found far more efficacious than gargling.

On the 21st, as he did not appear to gain any ground, and the sloughs were deeper and very extensive, and his stomach rejected the sarsaparilla, he was ordered Quinæ Sulph. gr. ij. ter die ex infus. rosæ. Vini. Rubr. Oss. quotidie, and a strong solution of Nitrate of Silver was applied to the throat.

23d.—His general health was improved, but the sloughing still extended. He was ordered to fumigate with cinabar night and morning. The second application produced such violent bronchial irritation that it was necessary to bleed him, and to desist from the fumigation.

By the 27th he had recovered from the bronchial affection, and his throat was much cleaner. The pure nitrate of silver was applied over the surface; milk and arrow-root diet, and sarsaparilla, were again resorted to, and he was removed into a *clean* ward. His general health improved, his throat began to granulate, and he was apparently going on well until the 25th of Nov. when the remaining portion of the uvula sloughed away, and the whole of the fauces again assumed a very threatening aspect. As the local application of the mercury had before benefitted it, the lotio flava was directed to be applied to the throat; and he was ordered to take Hydr. Oxyinur. gr. ½ ter die.

On the 4th of Dec. as the throat was not improved, he was again ordered to employ the fumigation, with greater precaution than on the former occasion. During the night he felt a peculiar sensation in his throat, requiring him frequently to swallow. At 4 A.M. he vomited up nearly three pints of blood, and became alarmingly faint. The house-surgeon, Mr. Chapman, was sent for, who ordered him Plumbi. Acet. gr. j. Opii. gr. ss. 4tis horis, and directed him to take every thing quite cold. The bleeding did not recur before I visited

him at half-past 12. He was then in a most alarming state; his pulse so feeble that it could hardly be distinguished; and his whole body bathed in a cold clammy sweat. It was quite obvious that a recurrence of bleeding must prove speedily fatal. I had just heard of Mr. Mayo's successful operation, and should have been disposed to give the patient the chance of success from the same means, but it was quite impossible to determine from which side the bleeding took place, so very extensive was the sloughing in every direction. Under these circumstances he was directed to take Alum. gr. x. ex Inf. Rosæ. Ziss. c. acid. Sulph. dilut. m̄x. et Træ. Opii. m̄v. 4tis horis. He was kept in a state of the greatest quietude; fed entirely on iced fruits and milk; and most narrowly watched. Without detaining your readers with too minute a detail of the case, suffice it to say, no return of bleeding took place. In a week he was much recovered in his strength, though very feeble. As the throat was still in a very bad state, and the sores on his head were spreading, the nurse was desired to rub Ung. Hyd. fort. 3j. night and morning, into the axilla. The mercury speedily began to have a most beneficial effect; the sores gradually improved, and are now nearly healed; his strength and general health have also improved in proportion. He has since left off the mercury, and has resumed the sarsaparilla.

I have stated that I should have been induced to have tied the trunk of the lingual, or the external and internal carotids, in this case, if it could have been clearly ascertained from which side the bleeding took place. I need hardly add, that if such an operation had been performed, and the patient had recovered, it is probable that the recovery would have been attributed to the employment of the ligature. It is on this account that I think it due to the profession to publish the case; at the same time I wish it to be distinctly understood that I do not pretend to offer an opinion respecting Mr. Mayo's or Mr. Luke's cases. I am desirous of taking this opportunity of concurring in opinion with Mr. Mayo in the propriety of tying the external and internal carotids separately in all such cases as may require the ligature of these vessels; but I should prefer tying the trunk of the lingual where such an operation could be effected. In Mr. Luke's case

it is obvious that the circulation continued through the bleeding vessel, as several slight returns of arterial hæmorrhage took place. It is probable that in this case, if the force of the heart and arteries had been greater, the operation would have failed, from the collateral circulation.

A case in every respect similar to Stennett occurred in Sewell's ward in the autumn of 1828. In this case a young, very delicate female, had repeatedly extensive hæmorrhage from foul ulcers occupying the whole fauces. The bleeding was successfully arrested by the same means as were employed in Stennett's case—namely, large doses of Sulph. Aluminis in infus. Rosæ, and feeding the patient on iced milk and fruits.—I am, Sir,

Your obedient servant,

H. EARLE.

George Street, Jan. 21.

CANCER OF THE UNDER-LIP REMOVED BY SIMPLE INCISION.

To the Editor of the London Medical Gazette.

Stafford, Jan. 20, 1830.

SIR,

I HAVE lately perused with considerable interest a report headed as above, in your valuable journal of August 15th last, and think it but justice to announce to the profession, that the operation therein described has been performed in six cases of disease of the lip, during the last five years (and all occurring before your announcement of it), by Richard Hughes, Esq. one of the surgeons to this hospital; his plan differing only in this respect from that recommended in the Gazette, that the inner and outer edges of the cut surface were nicely approximated by means of the uninterrupted suture, which I consider an important improvement; as the wounds have generally healed in very little more time than is required to effect union by the first intention after the hare-lip operation. Sometimes no other dressing was requisite than lint kept wet with a weak solution of sulphate of zinc, or smeared with confect. rosæ gal.

I find, on referring to the case-book, that the individuals who underwent the operation were between 40 and 70

years old. They mostly attributed the disease to the irritation of tobacco pipes.

The patients were all able to retain the saliva, except (after a second operation) in two cases, where the disease re-appeared. One was an advanced and desperate case, perhaps worse than that operated on by Mr. Morgan, as related at page 347 of the aforesaid No. and the subject of which has, in all probability, fallen a sacrifice, ere this, to the ravages of the disease. The other occurred in an old man, who had lost all the front teeth in the lower jaw, and whose upper teeth irritated the lower-lip. The whole of the lower-lip being removed, he was well in a week, and his appearance was improved. He was unfortunately allowed, however, at his earnest request, to retain the teeth, and a few months ago he came again, with half the new lip cancerous. Even after the removal and cure of this, in the same method, but very little deformity was visible; nor was he much, if at all, inconvenienced by the overflowing of saliva. Before he left the Infirmary, the upper teeth were extracted, to prevent a recurrence of the disease.

Mr. R. Hughes does not lay claim to the honor of inventing this operation, having seen, many years ago, in the *Medical Intelligencer*, a short account of it, extracted from a foreign journal: but he is probably the first who performed it in England, and has certainly improved it by employing means to close the wound, and thus much expedite the cure. While your correspondent and others, in ignorance of its first announcement abroad, and its re-announcement in England, erroneously call the common hare-lip operation, five or six years afterwards, "the operation which has hitherto been *exclusively* performed in cases of cancer of the lip," you will perhaps allow, that he who learns and adopts what another has done for the relief of human suffering, so long before his contemporaries, has merit hardly less than that of an inventor.—I am, Sir,

Your obedient servant,

THOS. F. KENEDEY,
House-Surgeon to the Stafford
County General Infirmary*.

* We are much obliged to Mr. Kenedey for his communication, and shall be glad to hear from him again.—E. G.

HÆMORRHAGE AFTER THE EXTRACTION OF TEETH.

To the Editor of the London Medical Gazette.

SIR,

IN this troublesome occurrence I have been in the habit of plugging the socket with a very fine soft vial cork, of a proper size, gently squeezed into it. Pressure upon this can also be increased at pleasure, by the patient's teeth of the opposite jaw. This I should think preferable to a plug of wax, recommended lately by one of your correspondents; as this last substance is liable to be softened, or perhaps melted, by the heat of the mouth. A small piece of lint, wet with styptic, may be put in on the point of the cork.

If you think the above worthy of a place in your publication, it is at your service; and

I remain,

Your obedient servant,

PETER CULLEN,
Surgeon.

Sheerness, Jan. 4, 1830.

MR. BATTLE'S PREPARATIONS.

To the Editor of the London Medical Gazette.

Reading, Jan. 25, 1830.

SIR,

ALTHOUGH personally unacquainted with Mr. Battle, I could not read without emotion the severe animadversions that have recently been made on his character. This gentleman, it is well known, has for some time past devoted himself to the subject of pharmaceutical chemistry; and, amongst other fruits of his inquiries, has discovered a preparation of opium, deservedly esteemed, and very extensively employed. But, alas! it is his misfortune to incur the displeasure of your Maidstone correspondent, who first accuses him of concealing its composition through love of gain, and then exhibits him to the public gaze as little better than an unprincipled charlatan. Now, sir, admitting, for the sake of argument, your correspondent's allegation, will he pre-

tend that all regard to private emolument is discreditable and unjust? If so, on what rests his own claim to remuneration for professional services? Really I am almost compelled to believe he seeks some sinister purpose under the guise of philanthropy, or that he is a total stranger to one of the strongest incentives in our nature. To imagine the former, however, would be to retort upon him his own unhallowed weapons, whilst the latter supposition is too pregnant with improbability to be easily accredited. For where is the individual who does not, in some degree, feel the incitements of self-love; who does not perceive there are certain duties which he owes himself; or whose zeal for the public good entirely blinds him to the interests of his dearest connexions in life? Such an one, were he to be found, would better deserve the appellation of a Quixotic casuist than of a man of sound and sober morals. But again, is not Mr. B. I would ask, by profession a pharmaceutical chemist, who vends, like any other chemist, the products of his laboratory? And if he have the good fortune to alight upon some valuable discovery, upon what pretence is he to be refused the privilege conceded to all other tradesmen of reaping the reward of his industry or his ingenuity? In whatever point of light, therefore, we view Mr. B.'s conduct, whether we try it by the illiberal insinuation of your correspondent, or the ordinary rules of honorable traffic, in either case it stands unimpeachable; in either case would he have been justified in concealing his invention, had he thought proper so to do. But this, his legitimate advantage, he has generously foregone; for no sooner had he, by a tedious and delicate process of experiment, prepared himself for the scrutinizing eye of the public, and given to his discovery that perfection of which he considered it capable, than he made a full and particular disclosure of it to the world. The truth of this assertion I will rest on the records of the London ophthalmic institution—whether he invited such of the profession as chose to witness his demonstrations. Is this the course which would have been pursued by a mere charlatan? Verily, I think not. Charlatanism, sir, belongs to the man who pretends to cure incurable disorders—who proclaims his nostrum a panacea; and, by such shameless effron-

tery, imposes on the credulity of the multitude. Let your correspondent prove one jot of this against Mr. B. and he shall no longer find in me an advocate; but if, as I am assured he cannot, he is then bound, by every principle, to make the acknowledgment of his error as public as his accusation. Nothing short of such a declaration can atone for the calumny he has uttered against an individual whose pharmaceutical labors entitle him to the thanks and encouragement of every medical practitioner. Need I here remind you, sir, of those admirable preparations of cinchona, sarsaparilla, and various other vegetable substances, of which he is the author? remedies, all of them of unquestionable value, but often unmanageable by reason of their bulk—liable to injury by ordinary processes, and requiring much judgment in selection. These he has exhibited in so condensed and genuine a form as to be, on all occasions, both available and efficient. Yet, in spite of all his useful endeavours, his motives and conduct have been severely canvassed and grossly misrepresented. Had your correspondent shewn himself a little more prone to examination than abuse, he would not have launched forth invectives which now recoil on his own head, and serve only to tarnish his reputation. May he, in future, act a more prudent part; and whilst I would offer him this piece of friendly advice, allow me to express my earnest hope that the respectable inventor of the sedative liquor will never suffer himself to be driven, by the assaults of ignorance or malice, from a line of investigation that cannot fail to augment the resources of the healing art, and lessen the uncertainties by which it is surrounded.

I am, Sir, yours, &c.

F. BAILEY, M.D.*

WESTMINSTER MEDICAL SOCIETY.

Saturday, Jan. 23, 1830.

DR. GRANVILLE IN THE CHAIR.

MR. JEWEL said—Some apology will probably be expected from me for my non-appearance before the Society at our last meeting. I conceive that the subject which I have to propose, agreeably to the announcement in the advertisement, to be important, inasmuch as

* We beg to answer the question put to us, in the affirmative.—E. G.

I have endeavoured to introduce a remedy into practice which, I believe, has never in similar cases been before employed; consequently my object was not to come here for the purpose of expressing my own opinions only, but to hear the opinions of others, and particularly of those who had devoted much of their time to the consideration of female complaints. When we last met, it happened that there were no minutes to be read, and consequently, it was necessary I should commence immediately; but seeing scarcely more than twenty members assembled, I thought it better to defer my observations until this evening. This was the sole reason for my not bringing the subject forward, as I came fully prepared to do so.

It is scarcely necessary for me to observe, that all vaginal discharges, not sanguineous, are usually included in the terms leucorrhœa, fluor albus, or whites. In the observations which I intend to offer to the notice of the society, I shall confine myself to those cases usually denominated functional, or cases occurring independent of disorganized structure. A line of demarcation, however, can scarcely be drawn, for if inflammation is a disorganizing process, structural disease may be said already to exist. It is a popular opinion, that most of the vaginal discharges have their origin in constitutional or local debility; hence a complaint of this kind is called a "weakness." Dr. Clarke, in his very practical work on female diseases, when speaking of the transparent mucous discharge not dependent on alteration of structure, classes such affections under two heads, namely, those which originate from or are accompanied by increased action in the vessels of the part, and those which arise from debility; and Mr. Burns has said that leucorrhœa may be caused by a state of increased vascular action, or by debility, preceded by increased action, or directly produced by debilitating causes. I am disposed to believe, if we investigate the pathology of leucorrhœa, we shall find that it most commonly has its origin in local inflammation or congestion. A great diversity of opinion exists among writers regarding the structure which is primarily affected. Cullen, although he admitted that leucorrhœal discharges proceeded from va-

rious sources, confined his observations to that species of the disease in which he imagined the discharge issued from the same vessels which in their natural state poured out the menses. Dr. Leake had also stated, that the discharge proceeded from the vessels subservient to menstruation; hence the terms *menstrua alba*—*menses albi*. I believe the discharge seldom issues from the uterine cavity. Others who have devoted much of their time to the consideration of female complaints, state, that these morbid discharges arise from the mucous surface of the vagina. Dr. Dewees has declared his belief that it consists in an altered action of the vaginal lacunæ, or glands, which furnish, in a state of health, the moisture so important to the part. It appears to me that the most frequent cause is a sub-acute or chronic inflammation of the cervix uteri. I believe, indeed I have reason to know, that very many such cases are mistaken for schirrus, and that in consequence, either no remedies are prescribed, or a very inefficient mode of practice is adopted. It is true it may be difficult sometimes to discriminate between chronic inflammation of the cervix, and incipient schirrous disorganization, particularly as the local symptoms are nearly allied. It can only be done by a careful examination into the state of the part affected. But suppose no diagnostic marks existed, I would ask two questions: first, is it not possible for inflammation in its chronic form attacking the cervix uteri, to terminate in carcinoma, or to say the least of it, in disorganization? Secondly, if the disease be schirrus, may it not be arrested in its progress, if not entirely removed, by active and judicious measures? Now the principle that schirrus is an incurable disease, and that it so exists throughout the system as to become developed in one part when eradicated from another, is to me as dangerous as it is unscientific, inasmuch as it puts an end to all pathological inquiry, and leads to the adoption of palliative measures only. I have seen many cases, which had been pronounced by experienced practitioners to be cases of schirrus, do well, the disease being entirely removed, and the uterus again taking on its healthy functions.

Now although other active means

may exert a control over such cases, whether they are genuine cases of schirrus, of chronic inflammation, or simple enlargement from congestion, no remedy can be employed with a greater prospect of success than the nitrate of silver, applied immediately to the seat of the disease. We know, indeed, that a portion of the uterus may be removed—that the operation is not by any means incompatible with life; but is it not the duty of the scientific surgeon to avoid, if possible, a painful and dangerous operation? Fortunate will it be to society, if the nitrate of silver should supersede the use of the knife, which in many cases I am confident it eventually will. But while some writers have insisted on leucorrhœa being always an idiopathic disease, and for its location having its seat in the uterus or vagina, others have maintained that it is sympathetic, having its origin in general functional disturbance. Cases certainly do occur which appear to depend upon disorder of the general health, but it should rather be said that this altered or relaxed state of the system is one which particularly predisposes it to local inflammation or congestion. Every severe or protracted case of leucorrhœa is accompanied by a variety of distressing symptoms. There will be a pale leucophlegmatic countenance, a morbid sensibility of the nervous system, an interrupted digestion, with general functional disturbance and exhaustion of the vital powers. Such are the common effects of profuse vaginal discharges, and hence the difficulty sometimes of distinguishing between cause and effect. The symptoms to which I have alluded are, I consider, for the most part, secondary or sympathetic; and consequently, if we succeed in removing the local disease, they will gradually disappear. It would, however, be injudicious to direct the attention to the one to the neglect of the other. Too much reliance ought not to be placed on the color and consistence of the discharge, as indicative of the morbid action existing in any particular organ or tissue. A serious disease may have infected the uterus for a long time without producing a corresponding change in the consistence and color of the evacuated fluid. Dr. Clarke has remarked, that a schirrous

tumor may have existed for years, attended only by a secretion of simple mucus, and I have known females liable to a morbid secretion from the vagina for many years, whilst the structural character of the internal organs have remained unaltered. The secretion often assumes a muco-purulent appearance, and it is then difficult to decide upon its true character. I consider all classifications of female discharges to be quite untenable. My principal object is to bring before the notice of the Society a remedial agent, which I believe has never before been employed in similar cases in this country; I mean the nitrate of silver. It must not be imagined that I wish to hold up this remedy as a specific. I consider the efficacy of any remedy to depend upon its judicious employment in reference to general principles. In the general treatment of these morbid discharges I would allude more particularly to general or local blood-letting, one or the other of which will, in most cases, be necessary, if my view of the pathology be correct;—then to purgation, perfect rest of the body, ablutions or the warm bath; and, with a view of relieving pain, and procuring sleep—to narcotics. A free evacuation of the alimentary canal I conceive to be the first step necessary in the cure; and if our object is to reduce the system to its natural standard, purgatives of the active kind should be preferred. On the contrary, where the functions of the digestive organs are impaired, aperients should be given which are mild in their operation. An accumulation of fæces in the alimentary canal will not fail to determine to the uterine vessels, thereby proving an additional source of irritation. It is too common in practice to have recourse to injections under all the diversified circumstances of vaginal discharge. Even in mild cases the astringent substances usually employed are extremely uncertain in their effects.

Of medicines given internally, I shall only speak of iodine. The efficacy of this medicine over the absorbent system is so well established as to require no comment; indeed there does not appear any article in the materia medica capable of producing such important changes on the glandular parts of the body as iodine. Its effects over the uterine system in particular, in almost all the cases in which I have employed it, have been

marked and decisive. It may not be unnecessary to remark, that its effect should be carefully watched, as, whenever the constitution is irritable, or if any idiosyncrasy exists, its exhibition, even in small doses, is occasionally followed by a train of symptoms of a peculiarly distressing kind.

I now come to the most important part of the treatment—the application of the nitrate of silver. After extensive trials and observation, I can say that its effects are as conspicuous in leucorrhœal complaints as in any of the various local diseases in which it has hitherto been employed. I would allude particularly to the different mucous tissues, such as those of the fauces and larynx. The mode I have adopted in its application has been to conceal it in a silver tube, on the same principle as it is employed in cases of stricture in the male, except that the tube should be adapted to the size of the caustic. I have also frequently used it in the form of solution, as an injection, in the proportion at first of three grains to the ounce, gradually increasing its strength. There is another method of applying it: a bit of sponge neatly fastened on to a piece of whalebone, may be dipped in the solution, and introduced frequently into the vagina; but I consider the most efficient mode to be that of applying it through the speculum. This, however, can only be accomplished in the absence of tenderness and excoriations: indeed there are many females who will not submit to the introduction of the dilator or speculum. I have now employed this remedy in a great variety of cases, and in almost every instance with success. It is satisfactory to observe that its application in either form gives no more pain than that commonly produced by the use of astringents. Whether the practice, which is a novel one in this country, may prove so successful in other hands as it has in mine, time and experience will determine. It must be admitted that, under ordinary management, such cases sometimes prove exceedingly obstinate, too frequently leading to irreparable injury of the constitution, or to permanent and fatal organic changes.

Dr. THOMSON having made a few remarks upon the location of the disease—

The CHAIRMAN called on the author of the paper to describe

in which he had employed the nitrate of silver with success.

Mr JEWEL then alluded to the case of a woman who had labored under excessive leucorrhœal discharge, with severe local pains, upwards of three years. She had been under the care of several practitioners, most of whom had pronounced the disease to be one of schirrus. The nitrate of silver was applied eight different times to the cervix uteri, which, together with some other means usually adopted, completely cured the patient. A case of gonorrhœa in the female was also mentioned, in which an injection, in the proportion of three grains to the ounce of water, effectually cured the patient in three days.

Dr. COPLAND observed on the necessity of deciding on the pathology of leucorrhœa, as the use of astringent injections sometimes did considerable mischief, when the complaint arose from inflammation. He alluded also to ascarides as being occasionally an exciting cause of the disease. The best mode of getting rid of these he stated to be by an injection of assafoetida and camphor.

Dr. GRANVILLE being in the chair, thought if he gave his opinions they might be considered an intrusion; but he would offer a few remarks with the leave of the Society. He would go even farther than Cullen had done as to the seat of the disease, for he believed sometimes the discharge came from the lining of the Fallopian tubes. In post mortem examinations he had removed flakes of the morbid secretion from the os uteri. The cervix was a very sensible part, and he thought the practice adopted by Mr. Jewel would frequently be of service. He had applied leeches to the cervix uteri, through the speculum of Recamier; and although the operation was a tedious one to the practitioner, it gave great relief to the patient.

Other remarks were made as to the part of the intestinal canal in which ascarides were sometimes found, and the best mode of getting rid of them.

Dr. COPLAND had never known a child at the breast to have ascarides.

MEDICO-BOTANICAL SOCIETY.

AT a meeting of this Society held a few days ago, the President (Earl Stanhope) informed the members that Mr. Frost had given up part of their property, and had signified his intention of surrendering the whole. We trust, therefore, that there will be no repetition of the absurd and disgraceful scenes which have recently taken place.

BOTANICAL DISCOVERY!!

A CORRESPONDENT, who attributes many wonderful properties to storax, informs our literary namesake, that it is "a juice produced from a tree called *caspar bauhine*, in Italy and elsewhere." We need not remind our readers that storax is procured from the *styrax officinale*. Caspar Bauhin and his brother John were two celebrated botanists, who flourished in the first half of the 17th century, and after whom the *bauhinia* has been named.

ROYAL WESTERN INFIRMARY.

SUCH is, or was, the name of an Institution in Nutford-place, concerning which a most edifying correspondence has lately been published—medical officers and pupils mutually abusing each other in good set terms. Dr. Ayre (from whose character we are warranted in presuming his account to be correct) states, that "at the beginning of November the funds were totally exhausted, the patients were literally without food, and the nurses urgent for their wages; the tradesmen refused farther supplies, and were becoming clamorous for the payment of their debts." The debt is stated to amount to £2500, and the income to be little more than sufficient to pay the rent! Yet was the College of Surgeons abused for not recognizing this paltry concern, and placing it on the same footing as the other *Hospitals* in London; while a few—we believe but very few—unfortunate pupils, misled by the false statements published with regard to it, were so far imposed upon as to enter to the practice, by which they have suffered severely both in time and money. Such is one among many of the evils which have resulted from the systematic imposition practised on the public by a certain portion of the medical press.

BRITISH COLLEGE OF SURGEONS.

A correspondent inquires how this goes on? We believe it does not "go on" at all. It was a miserable piece of humbug, which failed to attract even the passing notice that such absurdities often do. Nobody here either knows or cares any thing about it, and we cannot afford space to publish the "prospectus," or any other paper concerning it.

RABIES IN TWO DOGS AND A CAT.

A FEW evenings ago we had an opportunity of witnessing the examination of three rabid animals at Mr. Youatt's Lecture-Room. The first was a Newfoundland dog, which had been taken ill six days before (Tuesday). The first symptom observed was an inability to swallow, the morsels of food being allowed after a time to drop from the mouth. As this continued, Mr. Youatt was sent for on Thursday, when he found the animal with the above-mentioned symptom of inability to swallow, which was particularly obvious if the dog attempted to drink, as it continued lapping the water greedily, but without this at all diminishing in quantity. Next day there were, in addition, slight strabismus, and perceptible paralysis of the posterior extremities: the dog was perfectly harmless, and even playful, but now appeared to follow imaginary objects about the room. He was removed to Nassau-Street, where, as no medicines were allowed by the proprietor to be given him, the disease ran its course uncontrolled, and proved fatal on Saturday, the fourth day from the first supervention of the symptoms. Great increase was found in the vascularity of the membranes of the brain, especially at the base and at the medulla oblongata. The membranes of the spinal cord in the dorsal region were highly inflamed, and in the loins the medulla spinalis was considerably softened. There was very high inflammation of the back part of the tongue, the epiglottis, pharynx, and larynx: the stomach was covered internally with a dark brownish matter, and in the gullet was a portion of undigested filth. The pleura was highly injected, as was the inner surface of the heart.

In the other dog, similar inflammatory appearances were found in the fauces and air passages, and the stomach

was filled with a mass of undigested, black, dirty-looking matter. This disposition to swallow indigestible substances, and such as are refused at other times, is very characteristic of rabies; and was less conspicuous in the first dog only in consequence of no opportunity having been afforded him of getting them.

In the cat, the same general appearances of inflammation were found, but in a much less marked degree. Here also the stomach was filled with undigested matter, which, in this instance, consisted of the fæces of the animal, which it had been seen to eat in the course of its illness.

In the dog where the inflammatory appearances were most strongly marked, the animal had not been furious, nor had he shewn any tendency to do mischief. In the cat, however, where the post-mortem appearances shewed less that was indicative of inflammation, the creature was dangerously violent, and flew at any object presented to it, so as to render it necessary to have it secured in a box.

The simultaneous occurrence of three cases, which all proceeded from different sources, sufficiently shews how unfounded the popular notion is, that cold weather prevents the development of hydrophobia.

EXTRACTS FROM JOURNALS,

Foreign and Domestic.

DUPLEX CHILD—RITA-CHRISTINA.

A NUMBER of absurd and contradictory accounts of the bicephalous child, Rita-Christina, have appeared in different journals. The one which follows is drawn up by Dr. Martin St. Ange, whose opportunities of ascertaining all the facts were numerous, and whose narrative, while it is interesting, we have reason to believe is correct.

Rita-Christina arrived at Paris on the 26th of October, and many of the *savans* there immediately hastened to make their observations—particularly with a view to physiology. The author of this account applied the stethoscope to different parts of the chest: the action of the heart appeared to be sim-

ple, but could not be exactly appreciated, owing to the frequency of the respirations; the pulse at the wrist of both appeared synchronous with the action of the heart, being 90 in the minute. The respirations were performed by the two alternately, but in equal number in a given time.

They were at this time scarcely eight months old, but both appeared to recognise the voices of their parents. Christina was more lively than Rita. They slept either at the same time or separately; and when this last was the case, the one that remained awake, laughed or cried, coughed or sneezed, or took the breast, without disturbing the other. It was curious to see the one awake and the other asleep in this manner: the latter, in this case, breathed quietly, while the former was more agitated, by which an undulatory motion was communicated to the abdomen, the viscera of which seemed to be carried from left to right, or *vice versa*, accordingly as they successively respired. When both slept, one might be awoke without the other, by tickling the foot of the corresponding side. One might then be made to laugh without waking the other. Each had her own individual sensations communicated from both arms, and the lower extremity corresponding to her—the other not participating in them. But the parts on the median line were distinctly common; thus irritating the anus or vagina was immediately perceived by both. In emptying the bowels, both simultaneously strained.

There appeared nothing in their formation which presented any impediment to their living; and, in fact, their death seems to have been produced by the exposure to cold, which resulted from their journey, and the poverty of their parents depriving them of the necessary comforts. Rita, who was the weaker of the two, was attacked with bronchitis: the heat of her body now considerably exceeded that of Christina, and the pulse was no longer synchronous—that of Rita was 120, while Christina's was only 102 or 103. Christina did not suffer primarily, but her respiration was necessarily disturbed by the hurried condition of that of her sister. Three hours before their death Rita had extreme difficulty of breathing, the eyes were dull and half open, the skin covered with cold sweat, and the lower

limb of her side swelled. None of these symptoms were observed about Christina, who continued still to take the breast. When Rita died, Christina suddenly expired, having previously appeared sufficiently lively. — *Journal Hebdomadaire*.

IMPERFORATE UTERUS.

An interesting case of this nature was lately read before the Royal Academy of Medicine, Paris, by M. Hervez de Chégoin. The uterus was completely imperforate, with entire absence of the neck. The menses had been retained for seventeen years, and latterly this circumstance had given rise to dreadful sufferings. The vagina, four inches in length, ended abruptly, and the uterus could be felt at some distance above its termination. A trochar was plunged from the upper part of the vagina through the parietes of the womb, and a gum-elastic tube introduced. The patient did well. — *Jour. Hebdomadaire*.

MEDICINAL PROPERTIES OF THE KAHINÇA.

Kahinça is the name given to the root of the *Chiococoa racemosa*, a native of Brazil; a drug, on the properties of which M. Pelletier and Caventon have just presented a report to the French Institute. The bark of this root, given in powder, is represented as very uncertain in its effects; but the watery extract, on the contrary, is very constant in its operation, in doses of from twelve to twenty grains. It is, however, rather slow in producing its effects, and requires, sometimes, to be given in larger doses, so as to make a decided impression, which may then be kept up by smaller quantities frequently repeated. The Kahincic acid is still more certain, and in smaller portions, care being taken not to give it when the stomach is stimulated by other medicines. Administered with these precautions, it is an efficient diuretic and purgative, and has already been employed with success in a considerable number of cases. In dropsy, it is asserted to be preferable to any other medicine hitherto discovered; not because it is more energetic, but because it is not attended with so much inconvenience. It is bitter and tonic, without being irritating; it acts gently and gradually, giving to the organs a mode of action opposed to that which constitutes the disease. It is

difficult of solution in the stomach, and seems to act chiefly on the great intestines. Taken along with the food, it does not impede digestion. — *Jour. Hebdom.*

ORGANIC CHANGES PRODUCED BY INSANITY.

M. Esquirol, in a statistical report of the Asylum for Lunatics, at Charenton, recently published, states, that the disorganizations within the cranium had no relation either to the nature or violence of the insanity. Those in whom the delirium and other symptoms might have led to the expectation of finding extensive mischief in the brain, occasionally exhibited but very slight changes from the natural structure of the parts; while others who had but very little delirium and no bad symptoms, have had disorganizations of great extent and various character. In yet other cases (and M. Esquirol points out the fact as embarrassing to all theories as to the real nature of the disease) no change of any kind could be detected, either in the brain or its membranes. Nay, this absence of any appreciable disorganization, is sometimes met with in maniacs, who have had every variety of delirium, and died after having been insane for several years. A curious fact of a different nature, mentioned by M. Esquirol, is, that patients have in several instances died at Charenton from suffocation, owing to their food sticking in the gullet: two such cases are mentioned in the present report. He attributes the circumstances, not to stricture, but to paralysis; a complication which he has observed to be very frequent, especially among men. — *Annales d'Hygiène, &c.*

ADULTERATION OF MILK.

The simplest mode of adulterating milk is by the addition of water; but as this, if practised even to a limited extent, is easily detected by the opacity of the milk being diminished, it has been customary to add a certain quantity of flour. This adulteration is easily detected by the taste, and the flour falling to the bottom when it is allowed to remain at rest. To render discovery more difficult, the manufacturers of milk now have the precaution to boil the flour in the water, by which it obtains a permanent opacity, while

the flatness of the mixture is removed, and the natural sweetness of milk is successfully imitated, by the addition of a little sugar. To detect this fraud, however ingeniously practised, nothing more is required than to heat a specimen of the milk with a little sulphuric acid, by which it is coagulated; then to strain off the whey, and add to it a few drops of tincture of iodine. If flour has been used, a fine blue color is immediately produced. That such adulteration is abundantly practised in this metropolis, particularly about this season, we have no doubt; but, as Sterne says, "they manage these things better in France," and in Paris especially, where almost every man is a chemist, and where the police are on the *qui vive* against such frauds, the method above mentioned has been abandoned, and given place to another equally cheap and more ingenious, inasmuch as it resists the tests usually had recourse to. It is this, (see a paper by M. Barruel, in the *Annales d'Hygiène*):—An almond emulsion is made, with the addition of a little sugar-candy; and with this the milk is so effectually and so economically adulterated, that for the moderate price of one franc a color and opacity, accurately resembling that of milk, may be communicated to thirty pints of water. Some, who have thought even this not cheap enough, have used hemp-seed instead of almonds; but they give a peculiar taste, by which the adulteration may be detected, which is not the case with the latter. Another circumstance rendering the almond emulsion difficult of detection is the circumstance of the vegetable albumen being coagulated by acids, as the cheesy part of milk is. The adulteration, however, may be detected in this way:—it yields a much smaller quantity of coagulum than pure milk, and the coagulum which is formed, if merely kneaded with the fingers, yields globules of oil, which being no longer blended in the emulsion, are thus easily recognized. The methods above-mentioned of detecting these adulterations are so simple, that any one may practise them.

POISONING BY PRUSSIC ACID.

According to recent experiments conducted by M. Orfila, the antidotes usually recommended against the effects of Prussic acid are inefficient: they are, administration of ammonia, turpentine, coffee, &c. Ammonia is only useful when

the vapor, in a proper state of dilution, is inhaled (*one* part of liq. ammonia with *twelve* of water), as originally recommended by Mr. Murray. But a more powerful antidote exists in chlorine, as mentioned by M. Simeon, to the accuracy of whose statements M. Orfila bears testimony. The cold affusion is also possessed of considerable power, but is inferior to the chlorine. Of these means the vapor of ammonia and cold water, as being most readily procured, are likely to be most useful.—*Annales d'Hygiène, &c.*

POISONING FROM THE DOMESTIC SPIDER.

Dr. Weber, of Bouxvillers, gives the following account of this occurrence. A lady, who suffered from tooth-ache, was in the habit of using, as a remedy, a kind of plaister, made of equal parts of the crowned spider (*aranea diadema*) and treacle, which she placed in the hand opposite to the side on which she had pain. On one occasion, this lady having an attack of tooth-ache, sent for some spiders, as usual; but instead of these the domestic spider (*aranea domestica*) was brought. They were applied in the customary manner, and allowed to remain some hours beyond the wonted period, (ten to twelve hours) when the hand, forearm, and lower half of the arm became swollen and extremely painful, of dark yellowish color, and covered with a multitude of vesicles, accompanied by fever and anxiety. These symptoms continued for six weeks, and were at last removed by calomel pushed till it produced salivation.—*La Clinique.*

HEMIPLEGIA OF SENSIBILITY WITHOUT LOSS OF MOTION.

M. Auguste Lorient, aged 73, residing in the country, enjoying good health, and using moderate exercise, had never experienced any considerable illness, when, on the 10th of March, 1828, at the distance of about fifty paces from his house, he suddenly felt a numbness in the left leg. He thought that the foot had sunk into the ground, and instinctively seized the upper part of the limb with his hand, to prevent it from sinking still deeper: almost at the same moment the numbness extended over all the same side of the body. This circumstance, however, did not prevent him from being able to traverse

the distance between him and his house; and it was not till after he had sat down in a chair that he became fully aware of the fact that the left side was deprived of sensibility. Next day, Dr. Lesauvage, of Caën, was called to him, when he remarked the following circumstances:—The mental faculties were unimpaired; the pulse was about equally strong on both sides; he could walk, move his arm, and lay hold of objects with his hand, and the only action which seemed to be impeded was raising the arm by means of the deltoid muscle; he had, however, no consciousness of the motions which he exercised, nor of the impression of any foreign body which touched him, the skin of the entire side being absolutely insensible. The sight and hearing of the affected side did not participate in the insensibility, but the smell and taste were lost; so that the left side of the tongue was wetted with strong vinegar without being perceived, though it made a powerful impression on the right side, and the same phenomenon was observed when pungent substances were applied to the nostrils. When the hand was laid across the head, he only felt one half of it. This affection resisted all remedies, but did not interfere apparently with his health; so that he continued to go about his usual avocations. —*La Lancette*.

NOTHING NEW UNDER THE SUN.

In a late excursion to Pompeii, and examination of the various antiquities rescued from the oblivion of two thousand years beneath the ashes of Vesuvius, the Editor of this Journal was much interested by the numerous surgical instruments of our Pompeian forefathers, collected in the museum of Naples. His attention was particularly arrested by Weiss's dilator, the original of which may there be seen, so precisely similar to that manufactured in the Strand, that, excepting the handles (one of which is in bronze and the other in ivory), it would be extremely difficult to distinguish the ancient from the modern invention. Upon expressing his surprise at this remarkable coincidence, after a lapse of twenty centuries, the Curator of the Studii (the learned Abbé Jorio) observed, that it was probably no coincidence, but a *consequence*. He informed Dr. Johnson that, about ten or twelve years ago, a French gentle-

man took a memorandum of the instrument in question, and soon afterwards brought out at Paris a *modification* of the Pompeian speculum or dilator. Now Mr. Weiss, while improving on the Parisian invention, did actually stumble upon the plan of the original instrument, so that, if the handles were of the same materials, it would be impossible to say which was the elder. It appears from this, that of the two modern inventors, Mr. Weiss is the more original and ingenious. The Parisian disguised the model from which he worked, and made a clumsy instrument—Weiss, in his endeavour to improve on the furtive copy, ascended, unconsciously, to the merits of the original*.

Among the Pompeian instruments there is a trocar, exactly of the modern shape and size. The catheters are made of bronze, and very slightly curved, having an eye on one side, like our modern elastic catheters. There are some of these instruments without any curve whatever, shewing that the ancients knew the practicability of introducing the straight staff.

The ancients seem to have been perfectly well acquainted with the vapour-bath. At Pompeii, Dr. J. examined one which is on a magnificent scale, and admirably adapted for the purpose of a public bath. From a very fine room, heated by braziers, an entrance leads to the calidarium, or vapor-bath, whose walls, floor, and ceiling, are double; and capable of being filled with vapor from two or three cauldrons, by means of leaden tubes. The vapor is admitted into the room itself from the hollow walls, &c. by small capillary apertures, while at one end of the room issues forth, as from a fountain, a jet of boiling water, diffusing still more vapor through the apartment. Seats are ranged around for those who take the bath, and when finished, they retire into the room heated with warm air, to dry and clothe themselves.

While observing the ingenuity of the Pompeians, it is impossible not to conclude that they were a most degenerate

* Dr. Johnson called on Mr. Weiss a few days ago, and mentioned the circumstance of his dilator being a precise copy of that found in the ruins of Pompeii; at which the ingenious mechanic was not less astonished than gratified. That he did not benefit by the original is quite evident by the number of modifications which he manufactured (and which he still preserves) before he arrived at the present form.—J. J.

and depraved people. The figures portrayed in fresco on the walls even of the best houses, exhibit melancholy and disgusting proofs of the horrible depth of infamy, and even beastiality, into which they were sunk! It was high time that, like Sodom and Gomorrah, the cities of Herculaneum and Pompeii should be visited by fire and brimstone, to put a period to their iniquities, and draw the veil of oblivion over their obscenities! That veil, however, has been removed, and an awful catastrophe has preserved more unequivocal proofs and portraits of the private habits of the Italians, than the pages of their best historians. The Pompeians have been doubly unfortunate: they were smothered in the ashes of Vesuvius, and they were destined to be exhumated, 18 centuries afterwards, as specimens of the degeneracy of their times.—*Medico-Chirurgical Review*.

HOSPITAL REPORTS.

HOTEL DIEU.

Injuries resulting from blows in the Eye.

CASE I.—Temporary Amaurosis.—A young woman received a blow of a whip on the eye of the right side, and from that moment had complete paralysis of the organ. On this account she entered the Hotel Dieu about the beginning of November 1829. A slight degree of ecchymosis was perceptible on the conjunctiva at a point corresponding to the lower eyelid; but there was no redness at any other point of the organ; the transparency of the humors was perfect; the pupil was dilated and without contracting. The patient was bled the day after her admission, and on the day following leeches were applied to the temples. No benefit followed these evacuations. On the third day the menses appeared, and from this time the patient was able to distinguish light from darkness, and next to discern the objects which surrounded her. In a few days more she left the Hospital perfectly cured.

Violent commotions of the retina are very frequently followed by paralysis of that membrane, and the number of cases in which contusions of different kinds upon the eye have been followed

by amaurosis, is very great. M. Dupuytren has known two cases in which this has resulted from corks propelled from bottles.

CASE II.—Permanent Amaurosis.—M. Moreau de la Sarthe met with this accident. He was drawing a bottle of Seltzer water, and being short-sighted, was looking rather close, to see if he had quite cut the string. The cork flew at this moment and struck him in the eye. The blow brought on complete and permanent amaurosis.

The blow of a whip is sometimes accompanied by a singular complication—the introduction into the texture of the part of a portion of the cracker, which has become detached. When this happens, the injury is the more troublesome to relieve, from our being generally ignorant of the presence of the foreign body. The following cases of this kind have been described by M. Dupuytren.

Injuries from the blow of a whip.

CASE I.—Destruction of the Eye.—A man playing with a child, gave it a blow with a whip, which struck the eye. No wound about the organ was observed; there was only a great degree of ecchymosis. Violent inflammation afterwards took place, and was vigorously met by the usual means. Nevertheless it did not subside, but went on till it produced disorganization of the eye and evacuation of the humors, in the midst of which was found one of the knots of the cracker which was attached to the whip.

CASE II.—Portion of a whip becoming imbedded in the cubital nerve—tetanus.—A coachman playing with a young man, gave him a blow with his whip on the forearm. A small wound was produced on the fore part of the member, in the course of the cubital nerve. This wound healed, and at the end of a few days, a nodosity only remained at the site of the cicatrix. Sometime after, this young man was brought to the Hospital laboring under tetanus in an advanced stage. He died, and M. Dupuytren examined the boy in the presence of a physician, who thought that the cause of the tetanic affection consisted in inflammation of the spinal arachnoid. This membrane, however, as well as all the other organs, was found to be perfectly healthy. M. Du-

puytren next examined the nodosity, which remained on the cicatrix in the forearm, and was much astonished to find a portion of the whip enveloped in the very substance of the cubital nerve;—this discovery led to the investigation, which terminated in ascertaining the mode as above described in which the foreign body had come there.

EDINBURGH ROYAL INFIRMARY.

Cases of Amaurosis ameliorated by the use of Strychnine, and still under treatment.

GEORGE KINGHORN, æt. 42, admitted under the care of Mr. Liston, Nov. 28th.

Has labored under severe head-ache for four years. With the right eye he can merely distinguish light from darkness, but with the left he can perceive the number of panes in a window. Pupils natural. About three years ago his sight became first affected. Was at Walcheren in 1810, and has since been subject to intermittent fever, generally occurring once in three months, sometimes more frequently.

29th.—Gr. $\frac{1}{4}$ of strychnine has been applied to each temple in the usual manner.

R^x Solutionis Arsenicalis 3ij.

Tr. Amomi. Rep. 3j. M.

Sumat gtt. xx. bis indies.

1st Dec.—Had an attack of ague of twelve hours' duration.

4th.—The strychnine is continued, and has been gradually increased in quantity. The left side of the face is erysipelatous, and there is considerable constitutional disturbance.

6th.—The erysipelas has abated under the use of punctures, fomentations, and antimonials. Ordered sulphate of quinine with tincture of colomba.

21st.—The strychnine has been increased to gr. j. The vision of the right eye is not improved, but with the left he can notice objects at a short distance.

He is still under treatment.

Margaret Miller, æt. 39, admitted under the care of Mr. Liston, Nov. 28th.

The vision of the right eye is entirely gone, and that of the left is very imperfect; she can distinguish light from darkness, but cannot perceive her fingers, though brought close to her eye. The defect of vision commenced about six months ago, accompanied with frequent perceptions of vivid flashes, and was preceded by violent head-aches. The pain in the head had been partially relieved by copious blood-letting, but the right eye became inflamed, and the cornea is slightly opaque. Left pupil natural; general health somewhat impaired.

29th.—Gr. $\frac{1}{4}$ of strychnine was applied to each temple; her bowels were moved freely.

R^x Mur Hydrarg. gr. j.

Extr. Gujac. 3j. M.

Fiat mass. et div. in pil. xvi. Sumat unam ter indies.

Dec. 3d.—The strychnine has been gradually increased. She complains of severe head-ache.

4th.—Her head was shaved, and about 3viii. of blood were drawn, by cupping, from the nape of the neck. Pain of head much abated.

21st.—The strychnine is applied to the left temple only. The vision of the left eye has considerably improved, and she is able to perceive objects distinctly, although at a considerable distance.

She thinks that her vision is most perfect whilst the blistered surface is discharging freely, and that it becomes less distinct when the temple is partially cicatrized. Still under treatment.

REMUNERATION OF GENERAL PRACTITIONERS.

At the suggestion of a correspondent we give a place to the report of the very important trial *Handey v. Henson*, to which we called attention last week. We regret that the great length of some of the papers in the preceding part of present Number precludes us from laying before our readers some further observations we had intended to offer on the subject*.

COURT OF KING'S BENCH,

Saturday, Jan. 9, 1830.

HANDEY v. HENSON.

MR. TRESSICKER said, that this was an action brought by Mr. James Handey, surgeon and apothecary, against Mr. Henson, of Upper Stamford-Street, and attorney of this court. The demand was for 7l. 0s. 6d., for medicines and attendance furnished to the defendant's family. The first attendance was on a child of the defendant, to whom Mr. Handey was first called at night. He continued this attendance for a short time, and the child required but little medicine. He thought it proper to state here to the jury, that Mr. Handey had adopted a line of conduct in his medical practice, which he (Mr.

* In the leading article last week—for "the actual amount for medicines at the usual rate would not amount to above half the sum charged," read "the actual value of the medicines at the usual rate would not amount," &c.; and for "more will be accomplished for the honor and interest of the profession than all the frothy declamation, &c. read "than by all the frothy declamation," &c.

T.) considered highly honorable and respectable. It was that of not sending in large quantities of useless medicines, but attending when necessary, and charging for his professional talents and visits. Having mentioned this circumstance, he referred to the next occasion, on which a charge was made by the plaintiff. The case was that of Mrs. Henson, the defendant's wife, who had a severe eruption of the face, which the plaintiff told her might be relieved with little medicine, which was accordingly furnished. After an attendance of a little more than five weeks, the plaintiff charged five guineas for the medicines and visits, in one charge. This formed a second part of the bill; the third and last was for attendance on the defendant's mother-in-law, in which the same honorable mode of procedure was observed. The only difficulty which presented itself to him (Mr. Thessiger) was, that of proving the visits, but he trusted he should shew to the entire satisfaction of the jury, by the evidence he meant to produce, that the medicines were supplied, and the attendances furnished, for which the charges were made. He should now call his witnesses.

Lord Tenterden.—Is the plaintiff qualified under the act, or was he in business before the year 1815?

Mr. Thessiger.—He was in business before 1815, my Lord. I will call Mr. White.

Mr. James White, of the firm of White and Cauterley, proved having supplied the plaintiff with drugs, and having waited on him three times prior to the year 1815, and that the plaintiff was in practice as a general practitioner before that time.

Mr. Jacob Dixon sworn.—Was an apprentice of the plaintiff at the time of these visits; recollects the plaintiff being sent for in the night to the child, and his subsequent putting up and sending out the medicines necessary for Mrs. Henson's disorder. Had applied from fifteen to twenty times for the amount; judged what was the nature and state of the disorder from what the plaintiff communicated to him, and saying what the medicines were for. Defendant's wife had frequently promised to pay the bill. In answer to a question from Lord Tenterden, the witness said he could never see the defendant, either at his own house or his office. The defendant seemed to avoid him.

Mr. James Thorn was called to prove the remainder of the bill. Recollected not only putting up, but frequently taking the medicines to the house himself.

Mr. William Lobb, surgeon, of Aldersgate-Street, had seen the plaintiff's bill, and considered the charges perfectly fair and reasonable.

Mr. Platt, for the defendant, commented generally on the plaintiff's case. He admitted the first and latter parts, and objected only to the charge in the bill of 5l. 5s. He called upon the jury to look at the account, in which the charges for medicines amount-

ed to about 50s., leaving the remainder to be made up by visits, which there was no proof had ever been made; this, he thought, entitled him to their verdict. Mr. Platt called no witnesses.

Lord Tenterden.—Gentlemen of the jury, this action has been brought, as you have heard stated, by Mr. Handey, a respectable surgeon, residing in Waterloo Bridge Road, against the defendant, Mr. W. S. Henson, an attorney of this court, for the recovery of the sum of 7l. 0s. 6d., for medicines and attendance. The first and last items are not disputed. In one part of the bill there is a charge of five guineas, which appears to be for five weeks' attendance and medicines. There does not seem to be much dispute as to the charge for the medicines, but for the visits; and of these, it is said, there is no proof; but I cannot see how a medical man is to prove these attendances. It may be said that, when he makes them, he has his servant behind his carriage, or with him; but what can that servant prove? The opposing counsel says, that the persons in the house of the patient might be called to prove the attendances, but how are these servants or persons to be got at, or how are their names to be obtained? I think, Gentlemen, that the plaintiff has proved as much as can be expected; and Mr. Dixon proves that, on the plaintiff's return from his daily professional calls, the visits were entered in a book by him under the plaintiff's order, or by Mr. Handey himself. I cannot see, if a medical gentleman pursues the same honorable plan which this gentleman has done, of not sending in large and useless quantities of medicine, how he is to be remunerated, but by being paid for his attendances. I will hand you the bill, which you will please to inspect; and, from the evidence given, you will say whether you consider this to be a fair and just demand or not, and give a verdict accordingly.

The jury, after a minute's consideration, returned a verdict for the plaintiff, damages 7l. 0s. 6d., and costs*.

* This trial has been alluded to in the *Times*, and other influential papers; the above report of it is taken from the *Lancet*.

BOOKS RECEIVED FOR REVIEW.

Observations on the Functional Disorders of the Kidneys. By Wm. England, M.D.

An Introduction to Medical Botany. By Thomas Castle, F.L.S.

An Exposure of the Causes of the present Deteriorated Condition of Health, and diminished Duration of Human Life. By Joel Pinney, Esq.

NOTICE.

We shall be happy to receive a specimen from Y. Z.

W. WILSON, Printer, 57, Abchurch-Lane, London.

THE LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 6, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XIX.

Hydrophobia.

GENTLEMEN—Continuing the subject of Injuries, I proceed in the next place to speak of *poisoned wounds*. The term *Hydrophobia*, which means simply a *fear of water*, is applied to denote that dreadful (and indeed, so far as our present knowledge goes, invariably fatal) disease; which is also called *Rabies*, or *Rabies canina*—by the French *La Rage*—and madness, or canine madness, in English. It is a disease produced in the human frame by the introduction of a poison through the medium of the bite of an animal affected with the same disease. The poison is introduced in the saliva. It is the saliva of an animal laboring under hydrophobia, or rabies, that acquires the peculiar poisonous property which renders it capable of exciting a similar disease in other animals. No other part of the frame is affected except the secretion of the salivary glands;—no other fluid nor any solid part of the body possesses this property. It has been sometimes vaguely supposed, that the perspiration and breath of a patient laboring under hydrophobia, were capable of affecting other individuals; but this is a mistaken idea. Dupuytren had an opportunity of trying whether the blood of a person, laboring under hydrophobia, is altered, or possesses in any respect the virulent property which belongs to the saliva. He took the blood of a patient affected with rabies, and applied it to a recent wound made on a dog, without this animal becoming affected; and he applied the blood of a dog, laboring under hydrophobia, to the recent wound of another; he even injected the

blood of a rabid dog into an healthy dog, and he found that no effect was produced through the medium of this fluid.

We are only acquainted with hydrophobia as the result of the affection, or rather infection, which takes place through the medium of a wound. In this respect the disease is propagated, as small pox is, by inoculation; but hydrophobia cannot be communicated, like the small pox, through the medium of the atmosphere. It requires the application to a recent wound of the saliva of an animal already laboring under the disease. This is the only way in which the effect can be produced.

Now it has been enquired, and you will naturally ask, whether hydrophobia ever arises *spontaneously* either in the lower animals or in men? It is difficult to answer this question in the case of the lower animals, because if symptoms of disease shew themselves, we cannot tell what circumstance may have happened to the animal previously. We can hardly arrive at a clear negative proof on the subject. I may observe, however, that so far as our information goes, we do not know of its arising *spontaneously*, or of its originating from *internal causes*. In fact we are not aware of its being produced by internal causes, nor any external influence, except through the application of saliva in the way that I have mentioned.

A gentleman, who had a large number of dogs, succeeded in keeping this disease from his canine establishment, by following the rule of making every dog perform a quarantine before he allowed it to join the pack. In some insular situations too it has been known, that although dogs have abounded very much, hydrophobia has not shewn itself for a vast number of years. It is mentioned by Dr. Hunter, that in the island of Jamaica, where dogs are very numerous, no case of hydrophobia had occurred during a period of forty years. The mention of Jamaica leads me to observe, that the common notions respecting the warmth of the climate and the heat of the sun as favor-

ing the production of hydrophobia, are by no means well founded. It has been supposed that hydrophobia can only take place during the hot period of the year. This is not the case. I recollect an instance in this hospital of a patient under my own care in winter—I remember the circumstances particularly. The patient was thirsty, but could not take fluid—I got some ice, and he took it into his mouth, and eat it with great avidity, a mode by which the thirst was assuaged without exciting the symptoms from which the disease derives its name. Hydrophobia is said to be rare in the West Indies, although the dogs are numerous. Heretofore it is remarkable that hydrophobia did not exist in Egypt; and the French observed, during their residence there in their last campaign, that the complaint was not known either in the canine or in the human species. We have every reason to think that the complaint cannot originate spontaneously in the dog. May it originate spontaneously in the human species? As far as our knowledge at present goes, we should answer the question in the negative. It is true that something of an aversion to water—something of what might in fact be called *hydrophobia*, is sometimes seen as a symptom of other diseases. Some people have a kind of aversion to water. A spasmodic action may be produced in the throat by an attempt to swallow—in fact there is a kind of sympathetic hydrophobia, which may occur as the symptom of another affection. But if we speak of that marked terror and aversion to fluids, which constitute so striking a feature in the fatal affection distinguished by the term rabies, we only know of the affection being introduced into the system through the medium of a wound.

The animals which are liable to hydrophobia are, besides the human subject, the dog, the wolf, the fox, the cat, and the ordinary domestic quadrupeds—that is, the horse, ass, mule, cow, sheep, pig, and I suppose also the bear, though I believe it is not common to that breed. Perhaps other animals may be susceptible of it, but the experiment has not been made of communicating the affection to them, and they are not generally placed under circumstances that lead them to contract it in the same way as those above mentioned. I believe the disease can only be communicated from the dog, the wolf, the fox, and the cat. Now the three first are very nearly allied in species, and, in fact, are capable of breeding with each other. The late Duke of Richmond lost his life in consequence of hydrophobia contracted by the bite of a fox in Canada. The wolf suffers much from hydrophobia, and it frequently occurs in the human species where wolves are found to abound.

Many experiments were made in the French veterinary school at Alfort, in order to see whether the disease could be communicated through the domestic quadrupeds, and M. Dupuy found that when a sponge moistened with saliva, from a cow or a sheep laboring under hydrophobia, was applied to the recent wound of a healthy animal of the same species, no effect was produced; hydrophobia was not communicated. But if a sponge, containing the saliva of a rabid dog, was applied to a wound, then hydrophobia was communicated. Dupuy observed, that when sheep, affected with hydrophobia, were allowed to mix with other sheep, the rest of the flock received no injury; they did not appear to bite, or no effect was produced if they did. I believe no instance exists of its communication to the human species, except through the medium of one of the four animals above mentioned. In general, I believe, it is not likely to be communicated by domestic quadrupeds, because it is not in the nature of these animals to bite; so that even if their saliva had the power of producing the disease, from the absence of that disposition they would hardly communicate it.

It is an important question, whether the disease can be communicated from one human being to another, or by the human species to other animals? There is no instance known in which it has been communicated from one human being to another. Great fear has been excited, as it has been supposed that a person, laboring under hydrophobia, is inclined to bite and snap at others, and that great danger would arise of communicating the disease in this way. But in the first place, it is not a common thing for a human being to have the disposition to bite, and probably if a bite took place, no effect would be produced by it;—at all events numerous experiments have been made on animals, with a view to convey the poison of the human species to them. The saliva of a person laboring under hydrophobia has been injected into wounds in different ways, in various animals, and these experiments have all failed except in one instance. It is mentioned that Magendie and Breschet took the saliva of a patient laboring under hydrophobia, and applied it to recent wounds in two dogs. This was done on the 19th of June, and on the 26th of July one of the dogs thus infected went mad, and bit two other dogs, one of whom died rabid on the 26th of August. So that if these experiments be correct, and the high reputation of those that are said to have made them leads us to place credit in the statement, we must admit that the saliva of the human subject has the power of communicating the affection. This is the only fact, however, that I know of which tends to establish the point.

We have not any thing to do with the disease as it appears in the dog, yet it is well that a medical man should be aware of some points relating to the appearance of it externally in that animal, because his opinion is occasionally asked, in consequence of bites received from dogs, whether a particular animal may be supposed to have the disease or not. Now, in the first place, the dog does not labor under any terror of water; he has not any aversion to fluids. The dog will lap and drink, and go into the water, without displaying any of those symptoms that are exhibited in the human species. In fact, the disease so far cannot properly be termed *hydrophobia* in the dog; nor, in truth, are there exhibited in this animal any of those symptoms of great rage or fury which might be supposed to justify the name rabies, which means madness or rage. When the dog has hydrophobia, his manner becomes considerably altered. He grows peevish and sullen. He will, perhaps, not take notice of those he is accustomed to. He will stray from home and run wildly about; he will not go out of the way to get at other dogs or individuals, but is apt to bite those that come across him. He picks up and swallows small objects, gravel, grass, bits of wood, and a variety of minute substances of that kind. When he is tied up towards the latter part of the complaint, he will gnaw and bite the objects around him. He will grow angry, and seems wild if he is approached, and his chops are covered with a considerable quantity of tough saliva—and in that way he dies.

The disease is most frequently communicated to the human subject by means of a bite; in fact, the saliva of the rabid animal must be brought into contact with a recent wound, or with an ulcer, that is, with a breach of the surface of the body. It is not absolutely necessary, however, that this should be effected through the medium of a bite. An instance occurred many years ago, which attracted public attention very much, as it happened in the person of an elegant and accomplished foreign lady. She had a French poodle, and being fond of him, she allowed the animal to lick her face; and suffering the dog after he had become rabid to treat her with his ordinary caresses, he licked the surface of a pimple; she was thereby attacked by hydrophobia, and died from it.

Now wounds are not always equally effectual in conveying the poison. In the first place, a person may be bitten on a naked portion of the body, or on a part covered with clothes. You will easily understand that in the latter case the teeth of the animal are in a manner wiped or cleansed in passing through the dress of the person, and thus the virulent matter may be removed before it reaches the surface of the body. A great proportion of the bites that take place

in the covered parts of the body, are unattended with any bad consequences.

All animals are not equally susceptible of the affection, and it appears that the canine species is most so. Hence the name rabies *canina*, as it is most frequent in the dog. Thus, in a case in which one dog bit four persons and twelve other dogs, all the dogs got hydrophobia, and all the four human subjects escaped, although they took no precaution and employed no kind of treatment. In an instance where twenty persons were bit by one dog, only one had hydrophobia. There are other instances recorded in which the bite proved effective in a much greater proportion than I have now mentioned. Twenty-three individuals were bit by a female wolf, and thirteen of these died of hydrophobia in the course of a short time, besides several cows that were wounded by the same animal. In another instance where ten individuals were bitten by a wolf, nine out of the ten died. Twenty-four individuals were bitten by a wolf at Rochelle, and of these eighteen perished.

There is nothing peculiar in the appearance, progress, or mode of healing in a wound inflicted by a rabid dog. The injury goes through its progress just in the same way that a simple wound would do, and it heals without our perceiving any difference. As to the interval of time that elapses between the receipt of the injury and the occurrence of the symptoms—in this respect, hydrophobia in some degree corresponds with small pox, cow pox, scarlet fever, measles, and syphilis. There is, in fact, in hydrophobia a tolerably definite and regular period, as in the four former instances, but the cases of hydrophobia more resemble the latter in the period between the receipt of the infection and the occurrence of the symptoms. Generally speaking, the disease shows itself between thirty and forty days from the infliction of the wound. In a considerable number of instances that were collected by a medical society, the period of its appearing varied from thirty-one days to seventeen months. There may, perhaps, be some difference as to the appearance of the disease in the cases of wounds received from different animals, but there is hardly evidence enough to determine the point. In 15 patients, whose cases occurred under the observation of one surgeon, the time varied from fourteen days to fourteen weeks. Seventeen persons were bitten by a wolf; ten of them had hydrophobia, one at the fifteenth day, and one so late as the sixty-eighth day. Fifteen persons were bitten by a mad dog on the 27th January; ten received bites on the naked flesh; of these five died. The deaths occurred between the 27th February and the 3d April. Dr. Bradsley, of Manchester, has given an account (in the Memoirs of the Literary and Philosophical Society of that town) of a case

of hydrophobia, in which, after the most accurate inquiry he could make, he could not detect any cause of the symptoms, except the bite of a dog, supposed to be mad, that had been received by the individual twelve years before.

It has sometimes been observed, that changes take place in the part that has received the wound, before the symptoms of hydrophobia shew themselves. Of course, ordinarily speaking, the wound is completely healed, and the patients have forgot the occurrence, before the time the hydrophobia has come on. But it has been noticed that the wound frequently becomes a little red and swelled, some degree of pain is experienced in the limb where it is situated, and this shoots along the part towards the trunk before the peculiar symptoms of hydrophobia shew themselves. But in other cases, nothing of this kind occurs, and patients often have forgot that a wound had been received when the symptoms of hydrophobia occur.

The symptoms have been divided into the first and second stages. In the former, the patient usually first experiences some pain in the head, and some general, undefined indisposition; very soon after such symptoms have appeared, the characteristic effects of the disease shew themselves; that is, the patient begins to exhibit the peculiar symptoms of aversion or dread of liquids, and also to pass into a state of very high cerebral excitement. The dread of liquids is very commonly discovered by the patient accidentally: he goes to take some liquid or other, and he finds on bringing it to his mouth, or in attempting to swallow it, that the most violent convulsion is excited in the muscles of deglutition. If any fluid be admitted into the mouth, it is rejected by the patient, who turns away from it with aversion. After having experienced the severe convulsion, and the dreadful pain which the attempt excites, no inducement can lead the patient to repeat it; or if he did, in compliance with the desire of his friends, or of the medical practitioner, and they brought a vessel towards him with water, they would be obliged to put it away again. There is a spasm of the muscles of the throat first produced, and subsequently agitation of the whole frame, that render it impossible for any person to persevere in an attempt which leads to such painful results. Hearing liquid poured out into a vessel will bring on a spasm of this kind. Any thing that can raise the idea in the mind of liquid, or the sound of any thing resembling it, will be sufficient to bring on an augmentation of the spasm. It has sometimes happened that persons of strong mind, who have been desirous to overcome this feeling, have attempted actually to swallow, but it has produced a degree of convulsion threatening

suffocation if they only took any fluid into their mouth. In conjunction with this, there is a peculiar state of excitement of the nervous system. The slightest cause will bring on a paroxysm, and the patient is pursued by a thousand fancies that intrude themselves upon the mind. He supposes he is holding converse with a great number of individuals; that persons are coming into the room to attack him; he fancies himself in danger, difficulty, and distress. These thoughts come in rapid succession one after another, and keep the patient in the highest state of mental excitement. This is attended, of course, with acceleration of the pulse, and there are also pain of the head, a foul state of the tongue, and a disturbance of most of the organs of the body. You will naturally suppose that the disease cannot last very long. Hydrophobia terminates fatally in a period of between thirty-six hours and four or five days. Sometimes, indeed, it ends in a shorter period than that I first named. I have seen death ensue in a young subject in twenty-four hours. The high state of excitement of the nervous system has worn out the feeble powers of a child within the short period that I have mentioned, so that twenty-four hours of suffering have been sufficient to destroy a child previously in good health.

The symptoms are not invariably the same in all individuals. There are periods of ease and of extreme suffering, in most cases. Sometimes the mental powers remain very clear throughout the complaint. Sometimes a state of delirium, or one nearly approaching it, prevails throughout the greater part of the complaint. But, altogether, the excitement of the nervous system is so peculiar, that a person who has once seen the affection cannot fail to recognize it again. It is a state that can be confounded with no other disease; so that I think no person who has once seen a case can entertain a question whether there be really such a malady as hydrophobia. The affection is so different from every thing else, that I do not know any kind of disease that can be confounded with it.

Dissection has not elucidated very materially the nature of this dreadful affection. The morbid appearances do not correspond, in degree or importance, to the severity of the symptoms, or to their fatal termination. Slight appearances of an inflammatory character are found about the fauces—perhaps in the trachea; something similar may be found in the stomach, while a determination of blood, vascular congestion, and perhaps serous fluid in the cellular texture of the pia-mater, are found in the head.

With respect to the treatment of hydrophobia, I can only observe, that we are not acquainted with any plan, or any medicine, that seems to exercise the least power over the

symptoms of this dreadful complaint; at least there is no authenticated instance existing of recovery, after the symptoms of hydrophobia had once manifested themselves. Opium has been freely administered in this complaint by the mouth, and in the form of clyster, and by injection into the veins. Immense quantities have been given in these forms. Here, as in tetanus, opium exercises much less effect on the frame than it does under ordinary circumstances, so that immense doses can be borne. Magendie observes, that certain doses of opium injected into the veins of a dog, will set the animal to sleep; but ten times the quantity injected into a dog laboring under rabies, has no effect upon it. He also remarks, that a singular effect is produced on the animal economy, by causing a state of artificial plethora of the blood-vessels—that is, by injecting warm water into the veins. He tried this in the human subject. He threw a pint of tepid water into a vein, and he found the symptoms were mitigated for a time, and the patient was able to sleep. It seemed as if very singular benefit would be derived from the attempt, but the symptoms again came on, and the patient died at the end of five days.

Not long ago a proposition was made, founded on cases said to have been treated in the East Indies, for employing copious venesection in hydrophobia. Now you will easily suppose that the loss of blood had been already tried in a complaint of this kind. However, a patient had been bled largely, in an instance in which a favorable result was said to have occurred, in the East Indies. Since that, free venesection has been had recourse to in this country. It was found that the loss of a large quantity of blood would occasionally mitigate the symptoms for a time, but that was all the effect produced: it had no effect in postponing the fatal termination.

We come, then, to the only point in which medical men can be of any service—that is, prevention; and here the interval of time that elapses between the infliction of the wound and the appearances of hydrophobia, affords an opportunity for adopting measures of this kind.

Various means have acquired popular celebrity in the prevention of hydrophobia, to which we are not able to attach any real efficacy. Thus it has been supposed that dipping in salt water, after a wound has been received, will prevent the disease from occurring. This is popularly practised in many parts of England. I recollect, when I lived in the country in my youth, hearing of such a person, bitten by a mad dog, who had gone to be dipped in the salt water. They used to go to the Bristol channel, where persons were in the habit of ducking them, and then the people were satisfied that they should not go mad. I believe this

practice is continued to the present day. Various medicines have acquired great celebrity, and we can easily account for this: it arises from the fact, that out of all the persons bitten by dogs, very few go mad; therefore many persons may be bitten by dogs, even by mad dogs, and may adopt these means, and not have hydrophobia, although they would not have had hydrophobia if these means had not been employed. In fact, I may observe that hydrophobia is a much less common occurrence than people suppose. During the last thirty years, there have been but few cases of it in this hospital; I question whether above six or eight; and I think that, in from fifteen to twenty years of that period, there was not a single instance. Certainly the cases have been more numerous of late years; but, during fifteen or twenty years, you might meet several medical gentlemen, of considerable practice, and there would not be one who had seen a case of hydrophobia; so that the disease is not common. Now, inasmuch as the complaint is produced by the introduction of a poisonous substance into a wound, common sense seems to point out one mode of proceeding as likely to prevent it—that is, *ablution*; washing the wound thoroughly, to get rid in that way of the poisonous matter. But this mode, though so apparent, is generally neglected. I do not think that persons take great pains to get out, in this way, the poisonous matter from a wound of this kind. Hence it is not to be considered as an unnecessary caution which has been given by a late writer, who has published a small tract on Hydrophobia, the principal object of which is to recommend ablution, as a means of prevention. He recommends the use of tepid water—that is, from 90 to 100 degrees. You must pour it out of a tea-kettle, and hold it four or five feet above the wound; or you should inject it into the particular part that is injured, through the medium of the stomach-pump, water of the same temperature—and you should carry this ablution on for two or three hours.

The practice of applying caustic, or cauterising the parts, has been resorted to in wounds, more particularly where these have been extensive, or persons have been desirous to avoid the use of the knife. If nitrate of silver, or any other powerful escharotic, could be applied to the whole surface of such a wound, it would neutralize or destroy the effect of the animal poison that adhered to it. But, after this mode of proceeding, we can hardly be safe in saying that we have completely succeeded in applying the caustic to the entire surface of the wound, in such a way that there is no possibility of any particle of the saliva escaping the action of the caustic. It happened to Mr. Hunter to adopt this method, in the case of a young boy who had received

a bite. He was the son of parents of consequence; but, through a particle of saliva remaining in the wound, unfortunately hydrophobia afterwards came on. Thus the application of caustic is not to be considered as a safe mode of proceeding.

A third mode is excision of the bitten part; cutting out the whole of the wounded surface; taking care to remove, with a knife, the whole of the parts that have been injured by the teeth of the animal. I need not observe to you, that, if this be effectually done, there can be no risk of the subsequent appearance of hydrophobia. It is necessary, before you begin to do this, that you ascertain, as far as you can by previous examination, how far the teeth of the animal have penetrated in any particular situation, taking care that the excision goes beyond the part to which the teeth have reached. When you consider the great importance of the object you have in view—rescuing a patient, not only from death, but death the most appalling to the individual and to all those interested in him—you will consider it better to be rather liberal in your excision than to be sparing. On this account it is better to put the patient to a little additional pain, to increase to some degree the size and extent of the scar, than to run the risk of leaving a part through which the poison might be introduced to the system. This is the great means of prevention; it is the means on which your principal reliance must be placed. But the practice of excision is not inconsistent with ablution; in fact, some recommend ablution to remove the poison, and then excision after—first to stop the progress of the poison by ablution, and then to cut out the whole surface of the wound.

Now the practice of excision need not be confined exactly to the time immediately following the infliction of the wound: it will answer the purpose very well if it is done several hours after the wound has been inflicted. You will recollect what I mentioned to you of the interval of time that elapses between the infliction of the wound and the appearance of the symptoms. Some have supposed that the poison remains in the part from the time it is deposited there, from the teeth of the dog, until the symptoms commence. Of course we have no certain knowledge upon this subject, but it is not unlikely that the poison may remain in the part—that its effects may not extend beyond the part itself for some length of time after the wound has been inflicted; and then the question arises, how long a time after the wound has been inflicted may excision be practised with success? What is the limit? May it be practised at any period between the infliction of the wound and the occurrence of the symptoms, or not? We have no clear knowledge upon this point.

So far, however, as our information extends, and so far as reasoning on obvious principles goes, we should think it probable that the excision may be advantageously employed some days after the infliction of the wound. There is, however, this difficulty—we often do not know how far the wound has extended; it is while the wound is still open that we see its extent, and are sure that we remove the whole of the injured surface.

Some recommend, after ablution and excision, the application to the surface of the part of a plaister or poultice, covered with mercurial ointment. I am not aware of any particular efficacy that can arise from the application.

Stings, &c. of Insects.

In the sting of insects there is a small wound inflicted, and there is an acrid substance introduced into the wound. I speak of the sting of the bee, the wasp, the hornet, and tarantula spider. The wound is extremely minute, and of course the quantity of acrid matter introduced is small. It produces, however, a sharp pain, or smart tingling sensation, with slight swelling, and induration of the cellular texture, with swelling of the surrounding parts. The application of any cold liquid is sufficient to remedy the inconvenience that arises from a cause of this kind. In fact the sting of a single insect, the wasp or the hornet, produces but a trifling effect. When, however, a considerable number of these stings are received, a very serious influence may be produced on the animal economy. I think it is said that about twenty hornets, and a few wasps, are sufficient to sting a horse to death. A case was lately mentioned in the French Journals of a gentleman walking in his own garden. A large bee hive opposite him was turned over, and he imprudently ran to stop the bees and adjust it, in consequence of which they set upon him, and stung him, particularly in the upper part of the chest. He ran to his house, and the persons around him endeavoured to separate him from the insects, but he said that he felt himself sinking, and, in fact, in ten or fifteen minutes he died. The action of the heart became very much enfeebled, the pulse sunk; anxiety, and agitation, and alarm came on, and, in fact, the gentleman died.

There are certain insects which bite and which do not sting—that is, they make a small wound by certain parts which compose their mouths, but no venomous or acrid substance is introduced into the wound. This is the case with the flea, the bug, the gnat, and the scorpion. The bites of these insects produce a slight local inflammation somewhat similar to that produced by the sting of the insects that I have just mentioned. But a considerable number of

wounds of this kind may take place in an individual without serious consequences.

I have a few words to say respecting the venomous bites of serpents, but I shall defer them till our next meeting.

CLINICAL LECTURE

ON THE

OPERATION OF PUNCTURING THE BLADDER.

By CHARLES BELL, Esq.

Surgeon of the Middlesex Hospital, and Professor of Surgery in the University of London *.

GENTLEMEN,

BEFORE we dismiss the patient Crispin Hollins, in Clayton ward, I wish to draw your attention to the history of his complaint whilst the facts of his case are familiar to you. This part of practice, the treatment of the diseases of the urethra, has been improved more slowly than it ought, which may, perhaps, be owing to the loose statement of cases, as much as to false reasoning upon them. Instead of making a vain display of successful cases, by which very wrong ideas of this class of diseases have been propagated, let me rather select those which prove the real difficulties that we meet with in practice, and such as you have yourselves contemplated with interest.

Last night a patient was brought into the hospital, whose situation may convey to you the nature of those difficulties which we had to encounter in the treatment of Hollins, and I shall therefore describe his case to you.

William Walker, æt. 40. This man has had stricture of the urethra for about twelve years. During this time he has had various attacks of difficulty of making water, and he says it has been necessary from time to time to introduce instruments into his urethra, but it has never been possible to pass one the whole way into the bladder. For several days before his admission into this hospital he suffered extreme pain, from the frequent calls to make water, and the difficulty of expelling it.

These symptoms became more urgent, so that he could only expel a little urine at a time, and without relieving the desire to empty his bladder more completely. At length the urine kept constantly dribbling from him, and in this condition he continued for ten hours, when he applied at the hospital for relief—about ten o'clock at night. At first the house-surgeon attempted by gentle means to introduce a catheter into the bladder, but he felt an obstruction about the situation of the bulb, and at each touch of the instrument against this part the urethra bled. Desisting from this, he gave him a dose of castor oil, with 40 drops of laudanum; 15 leeches were applied to the perineum, and fomentation cloths were wrapped about the lower part of his abdomen. Still he made no water. At one o'clock a suppository, consisting of three grains of opium and four of soap, was used: Shortly after this he began to pass his water, and made to the amount of a pint. At three o'clock in the morning he was put into the warm bath, and he immediately began to empty his bladder with more freedom.

Monday.—He has since made water several times, though in a very small stream.

Now, gentlemen, let us attend to the circumstances of this case. The stricture seems to have been of long standing, and to have occurred at the part of the urethra where this disease is most common. The instrument used, instead of dilating the stricture, or penetrating it, no doubt entered the torn part of the urethra, and opening the spongy body, caused the discharge of blood. When the membrane of the urethra is thus torn anterior to a narrow and firm stricture, the difficulties are increased an hundred fold. It is then very difficult, if not altogether impossible, to insinuate the point of a bougie or catheter into the stricture; and it requires a perfect knowledge and experience even to warrant the attempt, for the surgeon has to distinguish by the sensation communicated to his finger whether the point be tearing the spongy body or wedging itself into the stricture. The house-surgeon, therefore, acted with proper precaution, and in the manner I would expect he should do after attending these lectures. He satisfied him-

* This Lecture may be considered as a continuation of those to be found at page 809, vol. II., and page 6, vol. IV.

self with using the means of allaying spasm.

There is much idle speculation to be found in books on the spasm of the stricture. The matter of fact is, that the muscles of the perineum and the neck of the bladder are disturbed by the inflammation and irritation excited by the stricture, and more especially by the interference with it. The method used here soothed the sensation in the part, and restored the muscles to their natural association.

I have shortly stated the circumstances of this case, in order to contrast them with the chief feature of that which I am about to detail to you more at length. You will observe that here the bladder was not over-distended: if it had been over-distended, so as to rise and be perceptible above the pubes, it ought not to have been left thus, nor the patient treated merely by opiates and the warm bath. In the following case, on the contrary, the whole practice hinged upon the circumstance that the bladder was over-distended.

Crispin Hollins, æt. 54, was admitted into the hospital on the 5th of August. The previous history of this man contains the detail of successive attacks of inflammation in the urethra during many years.

You will please to notice that by such repeated attacks, a stricture, at first entirely within our means of cure, becomes at length a confirmed callous contraction, in which the original membrane of the urethra is destroyed, and the surrounding tissue filled with coagulable lymph. This patient has accordingly had a stricture on which no bougie could make any impression; and when, at intervals, he became subject to obstructed urine, he was relieved only by means of opiates and the warm bath; when these failed, he was in danger of losing his life.

Two days ago he was seized with a difficulty of passing his water, and this occurred when, according to his own account, he was living regularly and moderately. During that day a small quantity of urine dribbled away from him; but since yesterday morning he has not voided a single drop. He suffers extreme pain; his countenance shows how much he has been harassed; the bladder can be felt distended above the pubes. The intro-

duction of the catheter has been attempted, but ineffectually; blood flows from the urethra, and every attempt to use an instrument is attended with fresh hæmorrhage. The surgeon's hand can feel that the point of the instrument is in the tissue of the corpus spongiosum—to strike the narrow proper passage is impracticable—to force on the catheter would be to drive it between the bladder and rectum. In the morning leeches and fomentations were applied to the perineum; he had also a draught of castor oil with laudanum and spiritus ætheris nitrici.

Now observe the peculiarity of this case. If the bladder were not distended—if it were capable of urging the urine through the constricted passage by little and little, we might still hope to diminish the spasms—we might still endeavour to insert a small bougie into the stricture; but there is no time for these means now, and no hope of relief from them, for the bladder has risen high above the pubes.

You will understand the consequence of this distention: after the bladder has thus risen, it makes no effort to contract; you lose, therefore, that aid in your endeavours—and unless, in operating, you make a passage which is absolutely free, not merely to admit the urine to pass, but to admit a catheter into the bladder to draw off the urine, the patient's life will be lost; for the bladder will continue to be more and more distended, until it inflame or actually burst. This is a matter that I find the student has some difficulty of comprehending. He says very naturally, Why should a person die of distended bladder, when there is a passage through the urethra? Attend to these common occurrences, and you will understand the reason. A woman is taken in labor; the child's head descends, it presses on the urethra, the labor is delayed; but is at last accomplished. The attendants do not observe whether the bladder is evacuated or not, and in four-and-twenty hours there is a tumor in the belly, like the distended uterus. Here the obstruction of the urethra has been removed, but, notwithstanding, the bladder is more and more distended, until it has acquired this great volume. Even in the female, although the muscular apparatus be more simple than in the male, a drop of urine is not passed.

without a consent existing between the detrusor muscle of the bladder and the sphincter of the urethra. The over-distended and paralytic bladder is attended with a resistance of the sphincter to relaxation; and so the accumulation goes on, although the urethra would readily admit the bougie or catheter. Take the still more common case, which may touch you more nearly:—a modest young gentleman is in society where he feels the call to make water, but resists it. The desire becomes more bearable, and he sits still; at length, escaping from his constraint, he finds he cannot pass a drop of water, and the catheter is required to evacuate the bladder, although there be no other obstruction than that which is occasioned by the wrong action of the muscles. We may enter more fully into this at another time; at present we only want the fact to be distinctly before us that the over-distended bladder is incapable of contraction. To return to our case. When my attention was called to this man, the bladder formed a large ball above the pubes, such as required the expanded hand and fingers to embrace it; and to divide the urethra, or to make an incision into the stricture, such as would be effectual in the case where the bladder was capable of contraction, would not suffice here. However, I placed the patient in the position as for the operation of lithotomy, and introducing the catheter down to the obstruction, I conceived that it touched the stricture, and I proceeded to expose it by incision. But I did not find it possible to pass the probe through the stricture nor into the bladder; it took a course easy enough and far enough, but obliquely. It was apparent that the catheter was in a false passage, and that it had been carried very far in a wrong direction. The previous attempts to pass the catheter could not succeed, because the point had passed the stricture by being forced out of the urethra into the cellular membrane. It was necessary to withdraw the instrument, and to ascertain the place where it had deviated from the urethra, or in other words, to find where the point, which had been obstructed by the stricture, had torn the urethra and passed out. When the catheter lies thus in a false passage, much dissection is required, from which the patient suffers irritation, and if the operation be prolonged,

ed, we have the most serious reason to apprehend death. Judging from former experience, I saw the time arrive when it was necessary to desist from prosecuting the dissection in the perineum, and to relieve the patient at once by puncturing the bladder. You will here observe, that to perform the operation of cutting into the urethra properly, and to secure its final success, it is not merely necessary to find your way into the posterior part of the urethra; for if you do not get into the urethra at the stricture, you do not accomplish what is necessary for its removal and the closing of the wound. But I have, in the first place, to press home upon you by far the most important thing to be learned from this case—the necessity of relieving the patient, and resigning the attempts to exhibit your own operative skill.—Had I continued under the false impression, that it was necessary for my reputation to dissect deep into the perineum, and pass the instrument, I should have lost my patient and deserved the loss of character also. I relieved the over-distended bladder by puncturing it, and put the patient to bed in a state of inexpressible relief. [Here Mr. Bell detailed the mode of operating, much as in vol. iv. p. 8, Med. Gaz.] The object was thus attained of saving the patient's life, which was in jeopardy—for if the operation in the perineum had been persevered in, or the puncture of the bladder delayed, we should have had effusion into the brain, most probably, preceded by vomiting, delirium, and oppression. From this he was saved by the puncturing of the bladder. He suffered very little after the operation, and had little fever. On the third day an attempt was made to introduce a catheter from the wound into the bladder, without making any further incisions, but this attempt failed. As the patient complained of the canula in the rectum giving him pain, it was withdrawn over the catheter, leaving the latter instrument only in the bladder.

Aug. 10th. He is going on well: the urine comes freely through the catheter.

Aug. 12th. It is stated that when I left town for a few weeks, the patient's strength having in the meantime rallied, my junior colleague cut into the urethra, and passed the catheter into the bladder. When this was done, the elastic gum-

catheter was withdrawn from the rectum. After the operation, the patient had a slight attack of fever, and during a shivering fit the catheter slipped out of its place, but was returned without difficulty.

August 24th. He is improving rapidly; the wound in the perineum is granulating.

Sept. 8. The wound in the perineum is still open; an elastic gum catheter is kept in the bladder. He was allowed the other day to try to make water without the instrument, and the urine passed partly by the perineum and partly by the natural passage.

November 10th. There is still a small hole in the perineum, but he is so anxious to return to business that he is made an out-patient.

Although I know that, as a general rule, I am more usefully employed in representing the common occurrences of practice, and enforcing the acknowledged rules of surgery, there are circumstances in this case which may without impropriety admit of an investigation somewhat speculative. May not the operation of puncturing the bladder be made a means—as it were, a first stage—of a further operation for relieving the urethra? The manner would be to puncture the bladder above the pubes, and thus relieve the patient from the excessive distention of the bladder; and when he had recovered by a few night's rest, and there was no danger of his constitution suffering too severe a shock, then to proceed thus:—pass an elastic gum catheter through the canula in the bladder; adapt its curve so that it will pass from the bladder into the urethra—pushing it on in this direction, it will arrive at the back part of the stricture; and now introducing the straight catheter in the common way anteriorly into the urethra, and having the elastic gum catheter at the back of the stricture, the operation of dividing the stricture will be easily and rapidly performed. Easily and rapidly performed—for you will observe, that I insist much upon this. I have seen the operation for fistula in perineo protracted for more than half an hour, the patient at length vomiting on the table through the irritation, and sinking under the effects of the operation. I cannot help thinking, therefore, that in the circumstances described, the

operation would be easily performed and without protracted pain, repeated incisions, or poking in different directions in the perineum. In the operation of cutting through a stricture, and introducing a catheter, there is great danger of the incision being made into the wide posterior part of the urethra, omitting the stricture altogether. The catheter is brought out anterior to the stricture, and introduced posteriorly to it, by which a considerable portion of the urethra is left behind the catheter. The first effect of this is a difficulty in closing the outward wound, and when the operation succeeds, a large portion of the urinary canal, equivalent to that which is condensed and lost, is made up of the cellular texture. This new canal is never a perfect substitute; it has a disposition to contract, and the patient must, for all the after period of his life, use instruments to counteract this tendency. This is the reason why I conceive that a catheter, directed upon both sides of the stricture, would be of so much consequence. I speak of cutting through the stricture, but it would be a great improvement if, by passing a small probe, we could dilate it; for then we might effect a cure by restoring the old canal, without the necessity of substituting a new one for any portion of it.

With respect to the puncturing of the bladder, you know the mode is to do this above the pubes, if there be disease of the neck of the bladder. That there is disease in this part consequent upon such narrow strictures as we are considering, you ought to know, and the preparation I now present is an instance of it. The long continued effect of a narrow stricture is to dilate the prostate gland itself, to cause abscesses in it, and these abscesses make their way between the rectum and bladder. There are five examples of this in the collection here, and in this preparation, which I recommend you to examine, the abscess, originally opening from the prostate, has become a firm walled sac, communicating with the bladder, and in some aspects hardly to be distinguished from it. Here I punctured the bladder, and you may see that the instrument has penetrated this bag or abscess and passed from it into the bladder. We have here, then, another

and a very cogent reason for puncturing above the pubes. The objections to puncturing at this part are, that the bladder contracts, leaving a long space between the perforated part and the outward wound in the integuments. The urine is apt to filter by the side of the canula, and to make a *dépôt* with bad suppuration behind the os-pubes. But if the operation of introducing a catheter by the urethra is to follow the puncture of the bladder above the pubes, this source of mischief would be removed, the bladder would be kept empty, and the canula would be withdrawn from above. Now you will remember, gentlemen, that I have been stating the case of a callous stricture in the urethra combined with an *over-distended* bladder—do not confound this with the case which, although it nearly resembles it, has an important distinction—I mean that of firm stricture in the urethra impermeable to instruments, and where the patient is dying from the almost continual action of a *contracted* and *thickened* bladder.

PRESENT STATE OF PHYSIOLOGY.

To the Editor of the London Medical Gazette.

SIR,

I SHALL feel obliged by the insertion in the Medical Gazette of the following observations upon the present state of physiology. These remarks may be considered as preparatory to a more extended view of the subject.

I am, Sir,

Your obedient humble servant,
HARDWICKE SHUTE, M.D.

Gloucester, Jan. 22, 1830.

Of all the difficulties to which an author is exposed, it is not easy to mention one which is more embarrassing than that of his opinions, which he of course believes to be correct, and which, at considerable labor and expense, he has made known to the world, being treated with cold and silent neglect. To persevere, under such circumstances, in the attempt to establish those opinions, subjects him to the charge of an over-weening confidence in their stability, and to leave them, "in cold obstruction and to rot," places him in the situation of the valiant warrior, who boldly chal-

lenged the world, and ran away by instinct from the mimic outline of an antagonist.

Nearly six years have elapsed since, in the first volume of a work, entitled "Principles of Medical Science and Practice," I published, what has been termed by one of the two reviewers who have noticed my opinions, "A New System of Physiology." To this system, whatever may be its proper designation, merits, or faults, I am still attached, because to this system no opposing argument, much less an argument of any weight, has hitherto been advanced; and it does not, I conceive, imply any excess of vanity on my part to attribute this circumstance almost as much to the inability as to the mercy of the critic. (For a specimen of medical criticism worthy of the 19th century, vide *Medico-Chirurgical Review*, No. 14, p. 358.) If the reviewer will himself attend to the reference, he will perhaps, in his calmer moments, be fully sensible how much he is indebted to my forbearance in allowing his remarks to pass uncriticised.

From the very partial notice which has hitherto been taken of my opinions, six out of eight reviewers having received copies of the two volumes now published, and passed them over in dignified silence, I infer that any innovation upon the present system of physiology, emanating from an obscure individual, is unworthy of consideration. The question, therefore, naturally suggests itself, whether the physiological opinions of the present day are so rational or self-evident as to render any deviation from them a proof of imbecile judgment?

If we take a general view of the subject, what is the evidence upon record? "Every step of the track through which I have had to pass, says Dr. Bostock, in the preface to his physiological work, is on debatable ground." "Physiology," says Magendie, "is still with a great many persons, and in almost all books, a work of the imagination." Is the fact of deviating from a system which is thus admitted to be questionable and imaginary, a proof of imbecile judgment?

As the physiological opinions which I have advanced, and which it is my intention to repeat in subsequent numbers of the Medical Gazette, apply chiefly to the function of the nervous system,

it may be advisable to ascertain how far there is an opening for a candidate in this department of physiological inquiry; whether, in other words, the present opinions upon this subject are so rational, or even plausible, as to have a legitimate claim upon our concurrence.

"The brain," says Dr. Good, "has so much of the general structure and character of a *gland*, as to be admitted to be an organ of this kind, almost without a dissentient voice in the present day." Now the physiological reader is well aware, that the secreting function of the brain has often been questioned, and rests upon the most meagre and contradictory evidence, and yet it is an assumed fact, not only founded upon false assertions, but leading to most irrational conclusions. Let my reader turn to Dr. Bostock's history of the structure and function of a gland, or any other history he pleases, and if, with the exception of the quantity of blood sent to the brain—a fact which admits of a different and satisfactory explanation, he can establish the analogy insisted upon, the false assertion rests with me, and not with the modern physiologist. Is it a justifiable inference? I shall have occasion to shew that it is not, the nervous influence being an agent known only by its effects, and those effects not being peculiar to the nervous system.

It may appear to those who have not much considered the subject, that the determination of this point is a matter of little or no consequence, and therefore it becomes our duty to specify some of the physiological difficulties which are ingrafted upon this erroneous view of cerebral action. If the brain be a secreting organ, the nervous influence must of course be a *peculiar* principle, or at least a principle, to the generation of which in the animal body, a nervous system is indispensable. How can the physiologist, with any show of reason, attribute certain effects in the animal body to the *peculiar* and exclusive agency of a nervous system, when he is under the necessity of admitting, that the same effects are constantly produced without the agency of that structure? What, under such circumstances, would have been the rational mode of arriving at something like a satisfactory explanation of the phenomena witnessed? The first question to be determined is obviously, whe-

ther the nervous influence be in fact *peculiar* to the nervous system and its action, and incapable of being generated by any other structure or function in the animal body. Supposing this question not to have admitted of a satisfactory answer, would it have been irrational to inquire, how far there might be, under certain circumstances, a similar, or, as Dr. Paley has termed it, a compensating power in the animal economy? But what has been done! The physiologist has assumed the fact that the nervous influence is a *peculiar* principle, and it is not surprising that, in his attempt to reconcile phenomena thus rendered irreconcilable, he has fallen into a quagmire, and, as usually happens in such a case, is defiled in proportion to the efforts made to escape from it. There may be a nervous system in all animals, says the physiologist, although it cannot be demonstrated. Prove that there is not! Is a questionable fact more entitled to our assent, because it professes to be supported by the acknowledged ignorance of one party, and the implied ignorance of another? There is no nervous system, says another physiologist, but there is no analogy. The effects indeed are the same, but it often happens that the same effects are produced by different agents. Is a questionable fact more entitled to our assent because it professes to be supported by a *lusus naturæ*?

Let us for a moment assume the fact, that the nervous influence is a principle not *peculiar* to the nervous system, but generated in the respiratory organs. All animals and vegetables respire, and therefore all possess that principle, which is generated in the respiratory organs, and has been improperly denominated the nervous influence. If such be the case, and I shall have occasion to shew that it is a fact having some claim upon our assent, it is, I conceive, no longer difficult to reconcile the phenomena in question, since they are reducible to a very simple proposition. Certain effects are referable to the agency of a principle generated in the respiratory organs, which principle is, in some instances, distributed by the circulating system alone, in others by the circulating and nervous systems conjointly. Is there any difficulty in understanding how, consistently with the above proposition, "the secretory

organs are, in the superior animals, chiefly influenced by a nervous system," and how "the secretions of plants are as abundant, and diversified, and as wonderful in every respect, as those of animals?"

We shall now endeavour to shew, that a similar difficulty, arising from the same error, and admitting of the same explanation, occurs in the modern physiology of the circulating system, as connected with nervous action.

The modern physiologist proves by experiment that, in certain animals, the heart is capable of contracting, for a certain time, without a continual supply of the nervous influence, and then jumps to the conclusion, that the action of the heart is wholly independent of the nervous system. How many unfortunate animals were tortured and sacrificed in pursuit of an inquiry, which confessedly terminated in a contradiction! "If it be said (I quote the author alluded to) that the results of these experiments imply a contradiction, that we cannot suppose the power of the heart to be wholly independent of the brain and spinal marrow, and yet influenced by agents applied to them, the reply is that such are the facts, of the truth of which any one may easily satisfy himself by experiments on the newly dead animal!" God forbid that for such a purpose such experiments be ever repeated. But this is not all—there is, we are told, no peculiarity in these unfortunate results. "On a closer examination of the phenomena of the nervous system, (continues the same author) we shall find other similar difficulties," that is to say, contradictions. Is a deviation from such a system, I again ask, a proof of imbecile judgment?

Now what are the chief circumstances involved in the important question of the heart's contraction as connected with the nervous system—a question which has been the subject of discussion for more than a century, and has at length terminated in an acknowledged contradiction? Previous to the time of Haller, the heart was supposed, erroneously, to be wholly dependant on the nervous influence. Boerhaave was of the same opinion as Willis; but besides the power of the nerves, he admitted two other causes of the motions of the heart—the action of the blood of the arteries of the heart on its fibres, and

of the venous blood on the surface of its cavities. According to him the concurrence of these three causes produces the contraction of the heart. Now it was proved by the experiments of Haller, that the heart is capable of acting for a certain time without a continual supply of the nervous influence, and consequently, without a concurrence of these three causes; but it still remains to be proved that these three causes do not severally influence the contraction of the heart, "*frustra vitium vitæveris illud, si te aliò pravum detorqueris.*" Did the power of acting for a certain time without the influence of the brain, justify the conclusion that the power of the heart was unimpaired by the removal of the brain, that the laws of its power were undisturbed, that the brain, under no circumstances, communicated power to the heart? Was not such a conclusion rendered more than questionable by the fact, that when the brain was removed, there was a limit to the influence of respiration, a limit to the heart's power of contraction, which did not previously exist? What is the glaring and undeniable fact? By the removal of the brain, the duration of the heart's power is reduced from years to as many minutes, and yet, says the physiologist, the brain does not contribute, directly or indirectly, to the heart's power; the heart is wholly independent of the brain. Is it surprising that experiments, instituted for the express purpose of supporting a contradiction, terminated in its acknowledgment? The error does not consist in the results of the experiments, but in the original proposition with which it is attempted to reconcile them. Let us suppose the doctrine of Boerhaave to be unclogged with the erroneous idea of the heart's action being dependant on the concurrent influence of the causes mentioned, and again revert to the assumed fact, that the principle supplied by the respiratory and nervous systems is the same. If such be the case, the physiologist, in removing the brain, removes an occasional cause of the heart's power, a cause upon which the perfection of its power depends, and the heart continues to contract, until the circumstances which rendered a double source of power necessary, take place. Is there now any difficulty in understanding how the heart and vessels may be capable of acting for a certain time without the

influence of the brain and spinal marrow, and yet be influenced by agents applied to them? why the circulation continues for a certain time in decapitated animals, and these burn without a brain? why the heart is capable of acting independently of the nervous influence, and is yet affected by the passions?

It might easily be shewn, that these remarks are equally applicable to the phenomena of muscular motion in general, but I shall confine myself to the fact of the heart and voluntary muscles having different degrees of dependance on the nervous system. The fact is virtually admitted by the present doctrine of muscular motion, since the nervous influence is considered to be the occasional stimulus of the heart, and the appropriate stimulus of voluntary muscles; but the fact, as now understood, involves the difficulty of attributing the same actions to the stimulus of different agents. "Why (says Mr. Coleman) should the same fibres, nourished by the same vessels, supported with nerves from the same source, and performing the same function, be excited to action by different causes?" If the arterial and nervous influences be the same agents and causes of power, it is obvious that this question is resolved into another—why should the same fibres derive their power from different sources? The heart is in immediate communication with the respiratory organs, where the cause of power is generated, and is scantily supplied with nerves, because it is independent of the brain in the ratio of its facility of communication with the origin of power. The voluntary muscles, on the contrary, are amply supplied with nerves, because they are dependant on the brain in the ratio of their distant communication with the origin of power, that is to say, with the respiratory organs. This, we shall have occasion to shew, is a law of nature, the brain being always developed in the ratio of the imperfection of the respiratory organs, and vice versa. If my reader is disposed to condemn the proposition, because it is contrary to the present doctrine of the day, I can only say that I have written so far to little purpose.

Let us now advert to another function, so peculiar, it is said, to the nervous system, that it cannot exist without it; I mean, sensation. It is of no conse-

quence that all animals, whether endowed with a nervous system or not, equally shrink from injury, since, in the former instance, it is a proof of sensation with, and in the latter without consciousness; another of the contradictions, I presume, before alluded to. Sensation without consciousness! How does the physiologist ascertain that, when an animal is injured, it only pretends to feel? The skin is the principal organ of sensation, and as every, even the most minute, part is sensible, the skin, it is said, must be endowed with an uninterrupted tissue of nerves. Why? have you any proof of the fact? No. "The mode in which the nerves are terminated in the skin is unknown." The nervous papillæ, then? Oh no! "All that has been said of the cutaneous nervous papillæ is entirely hypothetical." Where, then, is the proof? You might, I am aware, adduce many gratuitous assumptions in support of your opinion, but would it not be more candid to say at once—what becomes of my theory of sensation without it? Does the fact, I ask, rest upon any other support than its compatibility with a doctrine which may be true or false? "How deeply was the philosopher chagrined at the obstinacy of the fleas in not turning red when they were boiled, and when it was so evident that they ought to have done so!"

The modern physiologist, by a series of gratuitous assumptions, arrives at the unfortunate conclusion that, in sensation, the mind perceives what the animal does not—namely, the change in the brain; and the animal perceives (*Query*—without the agency of mind?) what the mind does not—namely, the change in the organ of sense. Is this another of the acknowledged contradictions? Is it, in short, common sense? Having said that the physiologist arrives at this unfortunate conclusion by a series of gratuitous assumptions, it becomes our duty briefly to state the grounds upon which the assertion is made. Sensation is thus explained by the modern physiologist: when an impression is made upon an organ of sense, a corresponding change, which the mind cannot perceive, takes place. This change is communicated by the nerve to the brain; a corresponding change, which is capable of being observed by the mind, takes place in the brain; the change in the brain is,

then, by some unknown process, connected with the original change in the organ of sense, and then the mind perceives the original change, and sensation is accomplished. When an impression is made upon an organ of sense, a corresponding change, it is said, takes place in the organ. Granted, with the proviso that the term change, applied to the living organ, means living action. This change is transmitted by the nerve to the brain. Denied; because the fact of sensation being destroyed by injury of the nerve, does not justify the inference, until it is proved that, under such circumstances, a change (that is to say, a living action, such as usually leads to sensation) takes place in the organ of sense. A corresponding change takes place in the brain. Denied; because the fact of a former sensation being often recalled, after the organ of sense has been destroyed, does not justify the inference, until it is proved that a recalled sensation (that is to say, an idea) and an original sensation, are physiologically the same. The fact is also proved (says the physiologist) by the circumstance of sensation being destroyed by injury of the brain. Denied; because the inference is unjustifiable until it is proved that the mind is, under such circumstances, in a state to perceive the change in the brain, supposing it to take place. The remainder of this imagined process is too wild to be deserving of any comment. Now what are the simple facts? When a living action takes place in an organ of sense, and is perceived by the mind, sensation is accomplished; but the action, both of the organ of sense and of the mind, is, in the superior animals, connected with the nervous system.

The modern physiologist has evidence of sensation without a *sensorium commune* to which it can be traced; the same evidence, it must be remarked, from which alone, under other circumstances, sensation is inferred; and yet maintains that a *sensorium commune* is essential to the existence of sensation. The modern physiologist maintains that the nerves of sensation and of motion are essentially different, and cannot perform the function of each other; and is, at the same time, under the necessity of admitting that "a nerve of motion may convey to the sensorium a sense of the condition of the muscle to

which it belongs." One set of nerves are supposed to convey from the brain and spinal marrow that which is secreted by them to all parts of the body, whilst the other convey, from all parts of the body to the brain and spinal marrow, the changes resulting from impressions made upon an organ of sense. Now it is impossible to imagine two functions more opposed to each other, and yet the structure of the organs by which these functions are supposed to be accomplished is so similar, that the best anatomist is unable to say, by inspection, which is the organ of motion and which of sense. Is there, I ask, any example in the animal economy of such opposite effects resulting from similar structures? These physiological difficulties and contradictions arise, we conceive, chiefly from the assumed facts, that nerves are the exclusive organs of sensation—the intercourse between the mind and body being confined to nervous matter alone; and that the connexion which subsists in the superior animals, between the mind and nervous matter, is different from that which subsists between nervous matter and the organs of the body.

It would answer no good purpose to accumulate examples of the many gross inconsistencies which characterize the present system of physiology; sufficient having, I think, been said to convince my reader that "there is something rotten in the state of Denmark." The disease is not less dangerous because it is silently preying on the vitals of medical science. The hand which attempts to alleviate the disease is not less worthy, because appertaining to an individual of little notoriety. To expect that, in the prosecution of my task, I shall meet with no other opposition than that of fair argument, would evince a very imperfect acquaintance with the habits of my species, and a mind little disposed to be instructed by experience. May it not prevent some useless expenditure of ink and venom, if I forewarn my antagonist that I carry about me a charm, which protects me against the influence of all *illegitimate* weapons; and that I am, like Achilles of old, vulnerable at one point only? That faults, and faults of magnitude, may be discovered and industriously exposed, I am most ready to admit; but the point to be determined is, whether my opinions are radically founded in error or truth.

The strength of a position is seldom threatened by the skirmishing of outposts, or the fate of an army involved in that of its videttes. It is too late to attempt a diversion when the enemy is in the camp. To the charge of egotism, suggested, no doubt, by the freedom of the foregoing remarks, I can only say, that a certain degree of confidence in my own opinions, being inseparably connected with the nature of my undertaking, the necessity constitutes the apology.

MEDICAL PROVIDENT INSTITUTION OF SCOTLAND.

To the Editor of the London Medical Gazette.

SIR,

By desire of the Directors of the Medical Provident Institution of Scotland, I enclose you a circular lately printed for them, explaining the objects and advantages of that Institution.

Conceiving these to be of great importance to the medical profession, they take the liberty of requesting that you will notice the Institution in any way you may think proper, in the pages of your valuable and widely circulated journal.—I am, Sir,

Your very obedient servant,

D. CANNAN, Sec.

41, Northumberland-Street, Edinburgh,
7th January, 1830.

Although Societies have existed for a considerable period both in Scotland and England, in which men of every profession could make provision for old age, and for their families or other dependents, after death—it has excited the surprise of many, that, until the formation of the Medical Provident Institution of Scotland, there was no fund established by any other society, with the exception of the funds of Friendly Societies, among the laboring classes, by contributing to which, provision could be made for a day of sickness.

The objects of this Institution are generally, to protect the members throughout their whole lives, and to make provision for their widows, children, or other dependents, after their death. The casualties to which pro-

fessional men are exposed, are, first, occasional or temporary inability to continue the personal exertions upon which their incomes depend, by reason of sickness or accident; and, second, the more durable or permanent incapacity arising from the infirmities of old age.

To provide against these, one must either of himself accumulate funds during health and middle age, or join with others in raising a common fund, sufficient to protect those on whom the lot of suffering may fall. The former is not always in the power of professional men, even though their health and vigor should remain unimpaired to a late period of life; the latter has not been acted upon to the extent which the case demands. Indeed, so far as relates to a period of incapacity from sickness or accident, the necessary protection is *unattainable in any other Institution.*

In addition to the dangers to which medical men are subject during their own lives, it is scarcely necessary to add that their widows, children, and other dependents, must be too often left in a destitute situation, rendered more painful, perhaps, by a few years of prosperity, and by the hopes it has led them to form.

In no other Institution, accessible to the middle classes of society, with which we are acquainted, are funds established to meet all these contingencies. It was the principal object of the promoters of the Medical Provident Institution to supply this defect. Its scheme embraces the following benefits: I. Health Assurance—II. Deferred Annuities, and III. Contingent Annuities.

I. *Health Assurance.*—Under this head, provision is made for professional incapacity, whether arising from sickness or accident; and this is combined with a permanent annuity in old age.

The opportunity of making such a provision will appear in an especial manner highly beneficial to the country practitioner, when we bear in mind the many casualties to which he, in particular, is so frequently exposed in the exercise of his professional duties, during long and weary journeys, often in dark and wintry nights, and over almost impassable roads; and to all medical men, when we consider that they have it least in their power to delegate their duties.

It has been objected to this part of the scheme, that the Institution will be

liable to imposition, it being impossible, in every case, to ascertain the truth of the statements of members, especially those residing at a distance, and in the country. Independent, however, of the honorable feeling which we believe to exist throughout the profession, the Institution, we think, will have ample security in the fact, that no member can have claim to this benefit "till five years after his entry, nor at any time for less than two weeks' illness, nor for more than two years, or 104 weeks in all. Should the disability, whether occurring at different periods or continuing without intermission, exceed two years," the member is then placed on the old age annuity, which is only one-half of the sick allowance. With such a limitation in view, it can never be the interest of any member to feign sickness; but, on the contrary, rather to save his allowances in middle age, and reserve them as a sure resource during the illness of a more advanced period. Should these be deemed insufficient securities, the fear of detection must ever prove a powerful, if not a complete check—it being one of the conditions of the Institution, that "the policies become void if the persons assured shall be proved to have made any false statement, or concealed the truth at the time of their entering the Institution; and if they shall practise imposition afterwards, by feigning indisposition, or otherwise." Members who assure under this head, forfeit the benefits also if their illness has been occasioned by their own misconduct.

II. *Deferred Annuities*, or annuities in old age, form the second table in the scheme. These annuities are combined with the health assurance in the former table; but they may also be assured separately, and may be entered upon at 50, 55, or 60: there is also a payment equal to a whole year's annuity, within three months after death.

III. *Contingent Annuities*, or annuities to widows or other survivors, form the third table. These annuities contingent on the wife surviving the husband, are too well known to require any description here. They may be granted to others than the wives of members—such as brothers, sisters, or other nominees.

The Medical Provident Institution is a *mutual* assurance scheme, and the whole funds belong to the assured; and

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should the rates of contribution be found to be higher than they might have been, the surplus will, in one form or other, be made available to the members, and not carried off by any body of proprietors.

It may here be proper to allude to an objection which has been made to this Institution, because it may have some weight with those who are most friendly to its objects. This is the want of a subscribed capital at the commencement, to guarantee the benefits. It might be sufficient to reply to this objection, that *two* of the most flourishing societies of the kind in existence—the Equitable Society of London, and Scottish Life Assurance Society of this city—were both established upon the same principle. It is not yet fifteen years since the latter of these Institutions commenced its active operations, with a heavy debt; and it is now several years since they declared a bonus of 26 per cent. Moreover, we believe that in no single instance where an association was begun with a subscribed capital, have they ever had occasion to touch a shilling of it: in most cases, indeed, it is merely nominal, and has always been subscribed not so much for the benefit of the assured, as for that of the subscribers themselves, who, in consequence of the alleged risk, carry off all, or nearly all the surplus, under the name of profits, while in no case have they ever been subjected to any loss. Their profits, too, let it be remembered, are just so much withdrawn from the funds, which would otherwise all have been divided among the assured themselves.

It is not, however, strictly true, with regard to this Institution, that there is no capital to guarantee the benefits. On the contrary, from the regulation by which no payments are made to members until five years after their admission, a considerable and daily-increasing capital HAS ALREADY BEEN FORMED, which will prove a sufficient security to the members; and they will always have the satisfaction to know, that whatever surplus may accrue, will be their own, and cannot be carried off by strangers.

If the advantages held out to the profession by the Medical Provident Institution could be obtained in either of the above Societies, it might be said that it was uncalled for and unnecessary.

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But this is far from being the fact; for to say nothing of the most important part—the Health assurance branch of this scheme, which does not enter into the plan of either of the others—it is certain that annuities form a very inconsiderable portion of their business.

In conclusion—to use the words of the first Annual Report of the Institution—“when the time and occasion for the distribution of the benefits shall arrive—when the sick and infirm, who would otherwise be destitute, shall be seen enjoying an independent subsistence, the reward of their own foresight—then will its merits be duly appreciated; and those who hesitate to join till others have led the way, may be among the first to regret that they are no longer in a situation to avail themselves of its protection.”

EXAMINATION OF APOTHECARIES' SHOPS.

A GENERAL practitioner, residing in the city, will feel obliged to the Editor of the Medical Gazette if he can inform him whether the Apothecaries' Company have the power to examine his drugs, although he neither retails medicines, nor dispenses any prescriptions whatever, unless when in consultation with a physician or pure surgeon.

January 29th, 1830.

[We believe that the Act of the 55th of George III. “for better regulating the practice of Apothecaries,” authorises and directs the Society to examine the drugs in the shops of *all* apothecaries. We know that such examination has been made in cases similar to those above supposed, and where the establishment was entirely private.—E. G.]

MEDICAL CLUB.

To the Editor of the London Medical Gazette.

SIR,

I wish to make known, through the medium of your Gazette, a desire, very

generally felt among the students in medicine, to establish a club for their daily convenience and accommodation, while in attendance at the different hospitals and schools of the metropolis. My proposition is, that a meeting be called for the purpose of discussing this subject, and appointing a committee to organize any plan which may be adopted. Perhaps the sanction and assistance of a few respectable resident practitioners may be obtained, and confer a benefit upon the proceedings of the juniors. My notion of the extent of the accommodation to be looked for is this—that rooms be provided, upon a moderate scale of outfit, sufficient to enable the members to have access to periodical works connected with the different sciences of our studies, daily papers, and reviews, &c., and any elementary books which can be laid in, to form a library of small extent, as a source of reference. That there should also be provided refreshment rooms, on a limited, simple, and economical scale, as to the provisions. The rules and regulations must, of course, be modified to suit the nature of the club, though somewhat on the plan, perhaps, of similar establishments, and such as may ensure order, comfort, and regularity. The establishment, also, must itself be generally such as the smallest possible contributions can embrace.

The want of something of the kind now suggested is particularly felt from the intervening time between lectures, &c., and the remainder of the night, after evening lectures, being at the disposal of pupils, who may employ this spare time both more usefully and respectably than they usually do, by having access to reading rooms, and other advantages of a club. Many pupils lodge in close unwholesome streets adjacent to the lecture rooms and hospitals, for convenience; whereas, if they had a club-house to resort to, they may hire a single chamber for sleeping only, in more airy situations, and farther off, so as to enjoy the benefit of a change of air and exercise. Moreover they would gain in every respect, by not being obliged to frequent low and indifferent chop-houses, where neither the diet nor the society is commendable. It is to be expected, likewise, that the moral influence of such a re-union of students, would prove beneficial to their manners and

habits, more especially in keeping them away from low billiard rooms, theatres, &c.

One important regulation might be secured, which is the opening of the club at an early hour in the morning, so as to enable pupils to procure a comfortable breakfast before the morning lectures of eight or nine o'clock, and at the same time it should be regulated that the club be closed at an earlier hour at night than is usual with other clubs in London.

If it be said that there are not sufficient medical students in any given part of the town to form a club for that district, then students in law, &c. may unite with us, perhaps, to effect that which, while students, they cannot otherwise acquire. It may be objected that the class of students is constantly moving, and that individuals are only in London during a limited period; but this objection may be met by managing the subscriptions accordingly, and diminishing the entrance contribution, as this last will be perpetually recurring. By such means a floating capital and a running subscription will always be kept up, and are to be calculated upon, the deposit being, for example, proportionate to the period for which the member is desirous of contributing, and a certain amount being considered as an equivalent for life, or so long as the annual subscription is paid up.

In this manner, I am inclined to think, more than one club may be beneficially established in the neighbourhood of the great London hospitals and schools, so as to be convenient to pupils within certain distances from each establishment. I should be glad to hear your opinion upon this subject, and if you approve of the suggestion, it is hoped that you will render us your assistance in drawing attention to the point.

I have the honor to be,

Sir,

Your obedient and humble Servant,

A MEDICAL STUDENT.

January, 1830.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

A Treatise on Poisons, in relation to Medical Jurisprudence, Physiology, and the Practice of Physic. By ROBERT CHRISTISON, M.D. Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.

WE have no hesitation in pronouncing this to be the most important and interesting work on toxicology which has appeared in the English language; indeed it is the only one expressly devoted to that subject which has been published for many years, and although poisons have been treated of by various writers on medical jurisprudence, the many questions which their history involves have not been handled in so satisfactory a manner on any former occasion. When we consider that many of our most efficient medicines are, in reality, poisons, and that their curative effects are but minor degrees of that influence, which, in its more complete development, is incompatible with life, it requires no other argument to convince the practitioner how essential to a perfect knowledge of his remedies is an acquaintance with their deleterious properties; and if in addition to this we call to mind the frequency of assassination and self-destruction by poison, we see at once how paramount in importance to the well-educated physician is a knowledge of the various subjects comprehended under the name of toxicology.

To Orfila belongs the high merit of having assiduously devoted himself to this subject, and by the unwearied perseverance of his labors cleared away much of the error that surrounded it, rendering the investigations of those who followed him less irksome, and more pregnant in positive and correct results. Among the laborers in this branch of science Dr. Christison has for several years been remarkable for the acuteness displayed in various papers which he has published, as well as for the extent to which he has been employed in cases of poisoning, as

connected with medical jurisprudence. The present volume contains the matured and revised results of these investigations, and will at once become a text book and an authority on the various subjects to which it relates.

There is one particular question, indeed, the discussion of which has scarcely occupied the attention of his predecessors, to which the author before us devotes a large share of his attention—we allude to poisoning *in general*. In most cases it happens that suspicion is directed against some poison in particular; but in others no individual poison is indicated, and there is merely a general suspicion of the individual having been taken off by unfair means. Now one of the objects in view in the first part of the volume is to enable the practitioner to say whether death has arisen from poison or not—thus affording grounds on the one hand for farther legal proceedings, or, on the other hand, setting at rest those vague suspicions which frequently follow cases of sudden death.

The first subject discussed is the physiological action of poisons, which action is divided into *local* and *remote*.

The local action consists in chemical decomposition, inflammation, and nervous impressions. The two first of these are too obvious to require any illustration; but with respect to the last, we may mention that the benumbing effects of the monkshood on the lips, when chewed, as observed by Mr. Brodie; and a similar consequence on the tips of the fingers from the vapor of Prussic acid, recorded by Robiquet, are held to be unequivocal examples of local nervous impressions in external parts; while other facts shew the same to occur in internal organs. Thus Dr. W. Phillip states that opium applied to the inner coat of the bowels of a rabbit, immediately paralysed the muscular contractions of the intestine, without the general system participating in the effect for some time after; and the same phenomenon was observed by Dr. Addison and Mr. Morgan, when they touched the intestine with tincun.

In common language we talk of the *general* effects of poisons; but Dr. Christison prefers the term *remote*, assigning as the reason that poisons which exert an indirect agency, do this on cer-

tain organs, and not on the general system.

These affections of distant parts can only be accounted for by attributing them to *sympathy* or to *absorption*. Till lately the former of these modes was regarded as the more common—recently the latter has been the favorite doctrine; but the author before us observes, that the latest researches rather tend, in his opinion, “to show that some poisons act by sympathy without entering the blood, and that, although many poisons do enter the blood, the operation even of these, nevertheless, consists of an impression made on the sentient extremities of the nerves, and conveyed thence along their filaments to the brain or other organs.”

The mineral acids frequently prove fatal in a very short period of time, producing imperceptible pulse, fainting, and mortal weakness; these symptoms being sufficient evidence of remote organs suffering, while the rapidity of the occurrence affords strong presumption of this effect being communicated through the medium of the nerves. But as absorption takes place with greater rapidity than was at one time supposed, some might still hold that the acid was absorbed, and thus carried to the remote organ which suffers. Dr. Christison meets this objection with the simple but satisfactory answer, that applying means which increase the absorption sometimes diminishes the effect—as mere dilution in the case of the mineral acids. That poisons, on the other hand, are frequently absorbed, is undoubted; and it seems at first sight remarkable, as this is the case, that it should be so very difficult to detect them in the blood. It is true that various poisons, as verdigris, sugar of lead, mercury, iodine, &c. have been discovered in the blood of animals that had taken them internally; but in the very large majority of cases, even of animals undoubtedly poisoned, no poison can be discovered in the blood by the most minute analysis. The first and obvious explanation of this is, the minute quantity of poison generally present as compared to the blood and secretions with which it is mixed; but another and more important circumstance is, that the poison is generally decomposed by the blood. Our author and Dr. Coindet injected

eight grains and a half of oxalic acid into the femoral vein of a dog—he was dead in half a minute. Now although it is obvious that the poison could not here have had time to escape by the excretions, yet could no trace of oxalic acid be found in the blood of the iliac vein and vena cava, which were examined for the purpose.

Dr. Christison next proceeds to speak of the organs affected by the remote action of poisons, agreeing with other experimentalists in regarding the heart, brain, and lungs, as the chief points on which the energy of poisons is exerted; though some take a much wider range—as arsenic for instance, the organs affected by which are very numerous.

The causes which modify the actions of poisons are then passed in review, and the following application made of the previous observations to the treatment of poisoning:—

“ In the instance of internal poisoning, the great object of the physician is to administer an antidote or counter poison. These antidotes are of two kinds. One kind takes away the deleterious qualities of the poison, before it comes within its sphere of action, by altering its chemical nature. The other controls its poisonous action after it has begun by exciting a contrary action in the system. In the early ages of medicine almost all antidotes were believed to be of the latter description, but in fact very few such antidotes are known.

“ The chemical antidotes act in several ways, according to the mode of action of the poison for which they are given. If the poison is a pure corrosive, such as a mineral acid, it will be sufficient that the antidote destroy its corrosive quality: thus the addition of an alkali or earth will neutralize sulphuric acid, and destroy, or at least prodigiously lessen, its poisonous properties. In applying this rule, care must be taken to choose an antidote which is either inert, or if poisonous, is, like the poison for which it is given, a pure corrosive or local irritant, and one whose properties are reciprocally neutralized. If the poison, on the other hand, besides possessing a local action, likewise acts remotely by an impression on the inner coat of the vessels, mere neutralization of its chemical properties is not sufficient; for we have seen above that such poisons act throughout all their chemical combinations which are soluble.

Here, therefore, it is necessary that the chemical antidote render the poison insoluble or nearly so, and that not only in water, but likewise in the animal fluids, more particularly the juices of the stomach. The same quality is desirable even in the antidotes for the pure corrosives; for it often happens that in their soluble combinations these substances retain some irritating, though not any corrosive power. When we try by the foregoing criterions many of the antidotes which have been proposed for various poisons, they will be found defective, as precise experiments have in recent times actually proved them to be.

“ The other kind of antidote operates not by altering the form of the poison, but by exciting in the system an action contrary to that established by the poison. When we consider attentively, however, the phenomena of the action of individual poisons, it will be found exceedingly difficult to say what is the essence of a contrary action, and still more how that counter action is to be brought about. Accordingly, few antidotes of the kind are known. We are unacquainted with any mode of inducing an action counter to that caused by arsenic and most of the irritant class of poisons. It appears probable that the remote operation of lead may be corrected by mercury given to salivation, and that the violent salivation caused by mercury may be corrected by nauseating doses of antimony. But these are the only instances which occur to me at present of antidotes for irritant poisoning which operate by counter action, unless we choose to designate by the name of antidote the several articles of the antiphlogistic method of cure. In the class of narcotics we are acquainted with equally few constitutional antidotes, although the nature of their action seems better to admit of them. Ammonia is to a certain extent an antidote for hydrocyanic acid, but by no means so powerful as some persons would have us believe; and I am not sure that in this class of poisons we can with any propriety mention another antidote of the constitutional kind.

“ On the whole, then, it is chiefly among the changes induced by chemical affinities that the practitioner must look for counter poisons; and the ingenuity of the toxicologist has thence supplied the materia medica with many of singu-

lar efficacy. When given in time, magnesia or chalk is a complete antidote for the mineral acids and oxalic acid, albumen for corrosive sublimate and verdigris, bark for tartar emetic, common salt for lunar caustic; sulphate of soda or magnesia for sugar of lead and muriate of baryta, chloride of lime or soda for liver of sulphur, vinegar or oil for the fixed alkalies; and these substances act either by neutralizing the corrosive power of the poison, or by forming with it an insoluble compound.

"In the instance of external poisoning the grand object of the practitioner is to prevent the poison from entering the blood, or to remove it from the local vessels which it has entered.

"One mode, which has lately been proposed or rather revived by Dr. Barry, and applied with success to man, is the application of cupping-glasses to the part where the poison has been introduced. This method may act in various ways. It certainly prevents the farther absorption of the poison, by annihilating for a time the absorbing power of the vessels of the part covered by the cup. It also sucks the blood out of the wound, and consequently washes the poison away with it. But it likewise probably compresses the nerves around, and prevents the impression made by the poison on their sentient extremities from being transmitted along their filaments.

"Another mode is by the application of a ligature between the injured part and the trunk, so as to check the circulation. This is a very ancient practice in the case of poisoned wounds, and is known even to savages. But as usually practised, it is only a temporary cure. As soon as the ligature is removed the effects of the poison begin. It may be employed, however, for many kinds of poisoning through wounds, so as to effect a radical cure. We have seen that most poisons of the organic kingdom are in no long time either thrown off by the system or decomposed in the blood; hence if the quantity given has not been too large, recovery will take place. Now, by means of a ligature, which is removed for a short time at moderately distant intervals, a poison, which has been introduced into a wound beyond the reach of extraction, may be gradually admitted into the system in successive quantities, each too small to cause death or serious mischief, and be

thus in the end entirely removed and destroyed. Such is a practical application which may be made of some ingenious experiments performed not long ago by M. Bonilland with strychnia, the poisonous principle of *nux vomica*.

"The last mode to be mentioned is by a combination of the ligature with venesection, deduced by M. Vernière from his experimental researches formerly noticed, (p. 9). Suppose a fatal dose of extract of *nux vomica* has been thrust into the paw of a dog; M. Vernière applies a tight ligature round the limb, then slowly injects as much warm water into the jugular vein as the animal can safely bear, and then slackens the ligature. The state of venous plethora thus induced completely suspends absorption. The ligature is next tied so as to compress the veins without compressing the arteries of the limb, and a vein is opened between the wound and the ligature; in such a situation that the blood which flows out must previously pass through the poisoned wound. When a moderate quantity has been withdrawn, the ligature may be removed with safety; and the extraction of the poison may be farther proved by the blood that has been drawn being injected into the veins of another animal, for rapid death by tetanus will be the result. It is not improbable that in this plan the preliminary production of venous plethora may be dispensed with; and then the treatment may be easily and safely applied to the human subject."

The second chapter is devoted to considering the evidence of general poisoning—an estimate of the circumstances which lead persons, professional or otherwise, to suspect that poison has been administered. The observations are necessarily of a very general nature, and in the first place refer to the symptoms.

The suddenness of the attack and rapidity of its progress can scarcely be held as of much importance, unless taken along with other phenomena. Diseases of the heart, apoplexy, the sudden penetration through the parietes of an ulcer in the stomach, are mentioned among others as cases in point. The uniformity and uninterrupted increase of the symptoms are likewise very uncertain, from their being observed in many diseases. The circumstance of the symptoms supervening soon after a

rheal comes under the same description as to its inability to afford positive evidence; but the reverse of this will often yield sufficient proof that poison has not been administered. If, for instance, the symptoms do not commence for some time after food or drink has been taken, the presumption is against poisoning—as in the following instance:

“A middle-aged man, who had long enjoyed excellent health, one afternoon about two o'clock returned home tired, and after having been well beaten by his wife, went to bed. At a quarter past two, one of his workmen found him gasping, rolling his eyes, and quite insensible; and he died in a few minutes. As his wife had often maltreated and threatened him, a suspicion arose that he had died of poison, and the body was in consequence examined judicially by Mr. Newbigging and myself. The only appearance of disease we could detect was a considerable tuberculation of the septum cordis and anterior parietes of both ventricles. This disease might have been the cause of death; for there is no disease of the heart which may not remain long latent, and prove fatal suddenly. But, as the man never had a symptom referrible to disease of the heart, it was impossible to infer, in face of suspicions of poisoning, that it must have been the cause of death; since the man might very well have died of poison, the disease of the heart continuing latent. Poisoning, however, was out of the question. The man had taken nothing whatever after breakfasting about nine. Now no poison but one of the most active narcotics in a large dose could cause death so rapidly as in this case; and the operation of such a poison in such a dose could not be suspended so long as from nine till two. An analysis was therefore unnecessary.”

Another circumstance to be kept in mind is, that the fact of poison having been administered, does not necessarily carry with it as a consequence that such poison has been the cause of death. As particular instances convey the clearest impressions, we shall likewise quote the following:—

“Charles Munn was tried at the Inverary Spring Circuit of 1824, for the double crime of procuring abortion, and of murder by poisoning. The moral evidence and symptoms together left no doubt that arsenic had been given, and that the deceased, a girl with whom the

prisoner cohabited, labored under the effects of that poison in a very aggravated and complex form for twelve days. After that she began to recover rapidly, and in the course of a fortnight more was free of every symptom except weakness and pains in the hands and feet: in short, all things considered, she was thought to be out of danger. But she then became affected with headache and sleeplessness, and died in nineteen days more under symptoms of obscure general fever, without any local inflammation. As neither Dr. Duncan, junior, nor myself, who were consulted by the Crown, had met with a parallel instance among the immense number of cases that are to be found in authors, we gave it as our opinion,—that granting the girl's first illness, as appeared from moral and medical evidence, was owing to arsenic, her death could not be ascribed to it with any certainty.”

In the observations which follow, on the evidence derived from morbid appearances, we do not find any thing to detain us, and therefore pass on to that from chemical analysis; and here there is only one point on which we shall touch. It is the fact that the absence of poison, according to the examination even of the most expert chemist, does not necessarily prove that no poison has been administered; nay, it does not even prove the poison (if any) to have been subtle in nature, nor small in quantity. Take arsenic;—On a trial which took place at Aberdeen, in 1821, it was clearly proved that an individual had been poisoned with that mineral, and yet no portion of it could be detected in the stomach or its contents. In a case published by Dr. Roget, arsenic could not be detected in the matter vomited twenty-four hours after it had been swallowed; and in another, recorded by Dr. Christison, only the fifteenth part of a grain was found in the tissue and contents of the stomach, though the person only lived five hours after swallowing it;—and in an American journal, the case is mentioned of a man who took an ounce of arsenic, and died in eight hours; yet no arsenic could be found on examination after death. On the other hand, there are some instances recorded in which arsenic has been detected long after interment. Dr. Christison alludes to one instance in which this occurred at the end of fourteen months;

and in this Journal (see Gazette, No. , page) will be found a case where the poison was demonstrated by chemical analysis seven years after death.

A disquisition is then entered into as to the moral evidences of poisoning; but these are not of a nature fit for our present consideration.

The second part of the work is devoted to the history of individual poisons, and we shall, in a future Number, allude to those the account of which contains points of novelty, which we observe to be the case with respect to arsenic, mercury, opium, and some others.

MEDICAL GAZETTE.

Saturday, February 6, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

MR. ST. JOHN LONG'S "DISCOVERIES."

DURING the last year, we have been asked some half dozen times, chiefly by unmarried ladies of a "certain age," and two or three half crazy valetudinarians, what we thought of Mr. St. John Long's "plan?" The question was a puzzling one, and we have been fain to give evasive answers; for, though aware that it consisted in the external application of irritants to the skin, and the exhibition internally of some inert, and therefore harmless medicines, still we were unacquainted with his opinions of disease, and knew not whether he possessed any merit raising him above the common empiric. From this dilemma we have been relieved by the appearance of a volume, entitled "Discoveries in the Science and Art of Healing, by John St. John Long, Esq.

M.R.S.L." and that none of our readers may be subjected to the mortifying acknowledgment of ignorance, which we were ourselves compelled to make, we shall devote a few columns to expounding the doctrines of this gentleman, together with the evidence on which he "claims the confidence of the country;" and before we go farther, we would here congratulate both town and country on the appearance of this medical luminary. Some, we know, lived in fear lest Mr. Long should die undelivered of his knowledge,—like Jobanna Southcote, of the modern Shiloh. Such an untoward event is no longer within the power of fate; the DISCOVERIES lie before us; and we know not which most to admire—the "claims" or "the confidence" of the author. Mr. Long is one of those candid and disinterested gentlemen who make no secret of the extent of their pretensions; but tells that he cures "hundreds of dying persons"—and that "if he does not inspire the vigor of health into all, none are dismissed unrelieved"!!!

The first great principle of his doctrine is, that the cause of all diseases depends "on a certain acrid matter, or fluid, pervading the system;" and so universally is this diffused, that no human constitution is without it. Like other newly-discovered bodies, however, some contrariety of opinion exists as to its properties. Mr. Long himself sometimes speaks of it as "a substance," and at others as "a fluid;" and again as an "inflamed fluid." My Lord Ingestre, again, goes farther, and expressly states*, that when extracted from the head, it is a fluid like quicksilver. This however, we believe, only occurs in those of a mercurial tem-

* "I am willing to bear ample testimony to the fact of your having extracted a fluid like mercury from the head of one of your patients, in my presence, on one or two occasions."—Letter, p. 47.

perament; for it is hinted by some, that what was extracted from his lordship was metal of a heavier nature. It even has been asserted, that when the application is made to the *chests* of consumptive patients, the matter is converted into gold, and that Mr. St. John Long never thinks so well of any case where this kind of drain is not successfully established. As, however, the author himself is silent on this point, we are not prepared to say how far it is entitled to credit.

The "matter" has some of the properties of caloric, being either free or latent. In the former condition it at one time appears as "small-pox;" at another, as "measles;" while in some it causes "hooping-cough," or "analogous inflammable disorders." Occasionally it manifests itself in the form of "insanity;" occasionally evaporates in a fit of the "gout." Now tortures its victim with the "tic douloureux;" now causes "cataract," or "deafness." It also produces the fatal "cholera" of India. Now crooks the "spines" of growing girls; and now hurries them to the grave in consumption—that is, unless they go to Harley-Street.—These are a few, and but a few, of the diseases which Mr. Long has "discovered" to arise from this "acid matter" in a state of freedom—the particular malady it happens to excite depending upon the time and mode of its development. Still there are some things in nature which are produced by other causes; and among these the author thinks it right to specify "mechanical injury" and "malformation."

In its "latent" state, again, it lies lurking in the constitution, ready to take the first opportunity of making an irruption; and this leads us to another of Mr. St. John Long's great principles:—none of the human race are free from this acid matter, for "although many persons may altogether escape exhibiting the usual external symptoms,

yet the peccant substance is more or less in the system." This would be a most discouraging truth but for that which follows—namely, that Mr. St. John Long can reach it even in this quiescent state; and by its timely removal, "prevent the occurrence of measles, small-pox, hooping-cough, consumption, and the more desperate descriptions of fever." In other words, let no one suppose he is in a state fit to do without Mr. Long's assistance; if he actually labors under disease, the necessity is obvious; if he does not, it is only because the malady is not yet developed; though apparently well, a little sweating will be found of service, both to the patient and Mr. Long, under whose hands, in this early stage, "the acid matter exudes from the body in the form of perspiration." In fact, it is quite obvious that all children ought to be carried to Mr. Long as soon after their birth as possible, to have this "acid matter" extracted, by which means all risk of future disease will be removed.

We shall attempt no refutation of Mr. Long's opinions, lest our readers should regard it as a mockery of their understandings; and therefore we have introduced the notice here, instead of among our analyses, which are supposed to contain at least *some* medical information. With respect to the author, if he is himself deceived, he is deficient in intellect, and *could* not understand us—if he be aware that what he states is nonsense, he is deficient in candor, and *would* not understand us. But we shall select a few passages in order that the profession may know on what grounds Mr. St. John Long is bold enough to "claim the confidence of the country."

Question in Chemistry.—"What healthful union can there be between mercury, prussic acid, henbane, digitalis, acetate of lead, sulphuric acid, nitrous acid, and flesh and blood?"

New theory of Blood-letting.—"In

most instances blood-letting produces more ultimate injury to the system than any temporary relief it may afford; because it does not remove the deteriorated *qualities* of the blood, but *quantity* from *quantity*, not *quality* from *quantity*; therefore the blood that remains in the system must be the same as that taken away."

Substitute for Bleeding.—"In place of bleeding, I extract the acrid and impure qualities (sometimes to the extent of half a pint and more) from the body."

Evil effects of Blisters.—"I do not employ a blister, because it affects the sound as well as the unsound parts, and extracts a fluid from the most healthy person; while my remedies never produce any such effects, and only act upon parts diseased."

Effects of removing the Acrid Matter.—"In the earliest age I remove this acrid matter by the most gentle means; I therefore prevent the occurrence of measles, small-pox, hooping-cough, consumption, and the more desperate descriptions of fever."

Growth of the Lungs.—"Many patients whom I have cured have said, 'they were convinced that their lungs grew.'"

Nourishing qualities of the Medicines.—"I administer nothing internally which would not afford nourishment; and when I apply the same remedies externally, they are perfectly harmless and healing—nothing in *small* quantities which might not be taken to *any* extent without injury—nothing to adults that would hurt children."

Efficacy of the Remedies.—"The virtues of these remedies I am willing to prove, by curing in one day any number of patients that may be offered to me as a test."

This last refers to the cholera of India; but whether the patients, on being attacked, are to be sent home to Mr. Long, or whether they are to send for him from Bengal, is not specified.

But enough, and more than enough, has been quoted to show, that since the days of Solomon there has been no one fit to be compared to Mr. John St. John Long, of Harley-Street. Not to speak it profanely, there are two Solomons

mentioned in history—both were great builders; one built a magnificent temple, and the other built castles in the air—one was king of Israel, and the other neither king nor emperor, but what, we doubt not, Mr. Long thinks quite as good—a most successful empiric. Solomon, however, was contented with his success in the "art," he did not aspire to the "science" of quackery, and was much too wise to commit himself by publishing. Mr. Long, as a matter of course, with all his professions of candor, has concealed the remedy which he uses; but he has been simple enough to explain his doctrines, and has thus laid bare the grossness of his ignorance, by attributing all diseases to one cause, and all cures to one remedy.

Appended to the volume is a set of the usual testimonials. There are many of them without names, some without dates, and are altogether greatly inferior to those commonly adduced by quacks. There is not one from any man of science, or whose opinion on such a question is of the slightest weight.

Not contented with calling these common-place puffs "the homage of justice," Mr. Long has the effrontery to libel the whole medical profession by questioning whether the "art of healing" (of course he means as practised out of Harley Street,) "is to be classed among the benefits of society." He has also the vanity to represent himself as the object of universal jealousy, because, "under providence, he succeeds in curing hundreds of dying persons!!!" There is one point more to which we must advert: he says, "it is already known to the public that I accepted a challenge from the faculty to put the success of my treatment to their test. A year has now elapsed, and they have not made any attempt to reduce the challenge to practice." Perhaps, in his next edition, Mr. Long

will be good enough to tell us how a challenge can be accepted which was never offered? Or why the measureless absurdity of his pretensions should require more investigation than those of any other charlatan?

It has never fallen to our lot to meet with so much nonsense in so short a space; but the whole may be yet farther condensed. Mr. Long holds that all diseases arise from the presence of "acid matter" in the part; and he removes this by irritants applied to the skin. He is anxious, indeed, to prevent it from being known that such is his method of treatment; but to all medical men it is obvious, that by this means alone can he produce the discharge which he persuades his patients is the essence of their disease; and which, as it can at any time be procured in greater or less quantity from every one, he is always safe in predicting will appear. As to his internal remedies, we have, in his own account of them, sufficient evidence of their being destitute of all power; for the common sense of mankind must discover that substances which can be taken "to any extent without injury," and alike by children as adults, can only be thus innocuous by being perfectly inert.

We have to apologise to our readers for the space we have devoted to this subject, but quackery is an evil of such magnitude to the public that it becomes an imperative duty to expose it. It is a curious part of the character of the English people, that they are more open to imposition than any other civilized nation in the world, in all that regards their health. Mystery is the secret of empiricism; and thousands of nostrums are daily swallowed with implicit faith, which would be looked upon with contempt if their composition was known. Even the Parliament, in its wisdom, conferred a national reward on Mrs. Stevens, for dis-

covering a solvent for stone in the bladder, although, when the patients died, the stones were found undissolved! So, with regard to Mr. Long, persons well-intentioned, doubtless, but ignorant of medical science, certify to things concerning which they are incapable of judging. With respect to consumption, for instance—nothing is easier than to make an anxious parent believe that her child is already afflicted with that disease, when there may be no real grounds to apprehend it; or the patient may be only in the first stage of the complaint, which we know is very frequently arrested. In either case, relief may be afforded by a removal from the scenes of dissipation which have been the primary cause of the attack. The cough may be relieved by the discharge of "matter" from the skin, just as it is by blisters; the patient recovers, as she (we say *she*, because most of his patients are females) would have done under any judicious treatment, or probably without any treatment. A testimonial is immediately asked, and rendered, as an "homage of justice;" the disease is certified to have been that which the fears of the patient or her friends led them to apprehend; and it is generally inferred, as a necessary consequence, both that the complaint was what it is called, and that, because Mr. Long cured it, therefore no other person could have done so. That Mr. Long should take advantage of the mania is nothing wonderful, but what shall we say of the intellect of those who are affected with it? By the way, it is fortunate that insanity is among the diseases which are cured in Harley-Street, for not a few of our author's correspondents evidently labor under that form of it called *dementia*.

PUBLICATION OF MR. LAWRENCE'S LECTURES.

WE have received the following letter :

To the Editor of the London Medical Gazette.

SIR,

ONE of your first subscribers, and a steady admirer of your principles, feels very anxious to know if you intend continuing Mr. Lawrence's lectures to the end of the course ; and if not, when they will be discontinued. A reply through the medium of an early number will much oblige, Sir,

Your obedient, humble servant,
CHIRURGICUS.

January 27, 1830.

Several other correspondents have appended to their communications inquiries concerning Mr. Lawrence's lectures, though none have come to the point so directly as "Chirurgicus." We are not sorry, however, to have an opportunity of setting ourselves right with our readers on this subject ; perhaps, indeed, we ought to have done so at an earlier period.

Mr. Lawrence, in the first instance, readily consented to the publication of his lectures ; but some time after, on finding that his other avocations did not permit him to prepare them in such a manner as he himself could have wished before they met the public eye, he withdrew from all the journals the permission he had granted. We then took the liberty of representing to Mr. Lawrence, that the publication had actually commenced under his sanction, and that we stood involved in property, and pledged in character, as regarded the appearance of his lectures in the Gazette ; but added, nevertheless, that if he could prevent them from being published elsewhere, we should be ready to make arrangements for complying with his wishes. At the same time we submitted, that while they were published in another journal, no purpose would be served by our discontinuing them, nor did we conceive that such could be his wish. To this Mr. Lawrence replied in a letter, dated Nov. 10th, which as it was addressed to us individually, and contains some matters of a private nature, we neither consider it necessary nor proper to publish ; but shall merely state, that Mr. Lawrence, in reference to our answer to his former communication, as above

detailed, observes, "I can only say, therefore, that your view of the circumstances seems to me a very liberal and proper one, and that I am quite satisfied with it."

Having entered into this explanation, it is almost unnecessary to add, that it is our intention to continue the publication of the valuable Course of Lectures which are now being delivered by Mr. Lawrence.

WAKLEY *versus* CHABERT.

A PRODIGIOUS assemblage of persons took place at the Argyll-Rooms on Thursday at 3 o'clock, to witness the performance of Messrs. Wakley and Chabert, the former having publicly denied the right of the latter to the appellation of "Fire-King," and made sundry formidable preparations for poisoning him with Prussic acid.

After all the usual preliminaries had been gone through, of heating the oven, &c. M. Chabert made his appearance, and was received with rather lukewarm applause. He stated that he was ready to put in execution all that he had promised, and requested to be allowed to address the audience through an interpreter. Mr. Welsh then stepped forward and said that M. Chabert was ready to administer Prussic acid to dogs ; upon which there was a general cry, "Let him take it himself." This, however, it soon became quite obvious M. Chabert had no intention whatever of doing ; and great indignation was gathering on the brows of all, when Mr. Welsh, with the utmost gravity, said, that unless he had previously ascertained that M. Chabert had actually taken Prussic acid on some former occasion, without its destroying him, he would not suffer him to do so in his room, *because the apartment was one in which entertainments took place that were chiefly frequented by ladies, and he was sure that such a thing having occurred, would be extremely hurtful to their feelings!!* This speech was received with roars of laughter, and diverted for a moment the impending storm.

Mr. Wakley now stepped forward and mounted the stage ; Mr. Welsh gave place, and the rivals were fairly pitched against each other.

"When Greek meets Greek, then comes the tug of war."

Wakley read the advertisement for the day, in which it was expressly announced that M. Chabert would repeat *all* his performances. Taking prussic acid was professed to be one of these. He had brought with him some of that substance, and now begged to know whether M. Chabert would take it or not.

This address was received with much applause. Wakley bowed and smiled, and then presented the poison; while M. Chabert shrugged up his shoulders, and, with a look expressive of no small consternation, declined it—adding, however, that he would take it another day.

What followed will furnish excellent materials for the newspapers, but is scarcely fitted for the pages of a scientific journal. The contest between the parties was long and loud; and the noise of the visitors, who were determined to be satisfied with nothing less than Chabert himself swallowing a dose of the Prussic acid which Wakley had brought, was of the most deafening description. Often did the unfortunate Frenchman offer to poison as many dogs as they pleased, but nothing would content them unless Chabert took the poison himself, regardless of Mr. Welsh's humane concern for the feelings of the ladies. Suffice it to say, that when Wakley asked the question—will you declare that you *ever* took Prussic acid? Chabert hesitated, and gave an evasive answer; which circumstance, taken with Mr. Welsh's unintentional admission, renders it quite obvious that he never did. He was then offered arsenic and oxalic acid, both of which he declined taking: in short, the impostor stood detected and exposed.

A Mr. King, who had before challenged M. Chabert, now stated that that individual had called upon him, and said, that if he continued to denounce him publicly it would be depriving him of his bread; an affirmation which was met on the part of the "Fire King" by an explicit denial—"A lie, gentlemen! I assure you a lie!" The tide, however, had now set in too strongly to be stemmed by the eloquence of Chabert or his considerate interpreter: the oven was getting cold as the audience became hot; threats were mingled with expressions of disappointment; the crowd rendered it impossible to retreat by the door; and the "Fire King" terminated the performance of

the day by bolting out at the window, and escaping by the balcony.

Several months ago we put our readers in possession of the facts with regard to Chabert's pretensions. We shewed that going into the heated oven was no more than had often been done by others, while we expressed our conviction that he did not really take any of the deadly poisons above-mentioned. This view was so much in accordance with that entertained by all medical men, that M. Chabert's performances have excited little or no interest among the members of our profession, who, knowing that he must be an impostor, took no trouble to investigate the matter farther. To Wakley belongs the merit of having made this apparent to the million; and it is so seldom we have any thing to say in his commendation, that it were sinful to withhold the praise which is justly due to him on this occasion. Chabert is a cunning rogue; but here he was matched, and over-matched, by his opponent.

ROYAL INSTITUTION.

Means of resisting Fire.

THE evening assemblies for the season began last week with Mr. Faraday's account of Chevalier Aldini's apparatus for the protection of firemen and others who are exposed to flame. Previous to his entering upon the subject, Mr. Faraday briefly recalled the attention of the members to the past season, and claimed their assistance for the present. It gives us pleasure to mention, that on this, the opening night, we saw no appearance of any want of zeal in the cause: several noblemen and distinguished gentlemen were present.

After stating generally that Chevalier Aldini had for a long time been engaged in contriving and perfecting such defensive clothing for firemen and others as should enable them to penetrate and pass through flame, Mr. Faraday pointed to a few of these suits, composed of asbestos and wire gauze, which lay on the table. He then, as briefly as possible, touched upon the nature of flame, and the effect of wire gauze; explaining the principles concerned, in so far as they bore on the present application. Wire gauze, it was observed, quenches flame, by abstracting heat, itself acquiring a high temperature. Pointing out this circumstance by experiment, he referred

to the second part of the Chevalier's clothing, which consists of asbestos, and prevents the heat passing to the body. Two magnificent specimens of asbestos cloth, many feet square, were before the meeting. The difficulty with which this substance conducts heat was very clearly explained by the lecturer, and contrasted experimentally with the good conducting powers of metals and wire gauze. Further proof was then given by Mr. Faraday, who having put on an asbestos glove, grasped an ignited and glowing bar of iron: he also carried on the palm of his hand a thick mass of the same metal, at a bright red heat, from one side of the room to the other, as if it were in its usual and harmless state.

After many further illustrations, the strongest proof to which Chevalier Aldini's system could be put in a room, was given in the following manner:—An Italian fireman, who is practised in the use of the apparatus, put on an asbestos cap-mask, in which were holes for the mouth and eyes guarded by wire gauze, a cuirass and casque of wire gauze, and, with a shield of the same material on his right arm, he faced a flame produced from oil gas, obtained by opening the orifice of a condensed oil-gas vessel, between two and three feet long: the flame was very bright and dense, and issued with terrific force from the vessel: in this posture he held his head and the upper part of his body, until the lecturer and the audience becoming anxious for him, shut off the gas. Numerous considerations were then entered into respecting the intense heat of flame, the currents necessarily existing with it, the moral possibility of breathing the air from the middle of a clear, undulating flame of steam, &c. and an account of still stranger trials with the apparatus, which had been made in Geneva, Paris, Florence, and elsewhere, and which are to be given in London. The Chevalier Aldini was present; he is the nephew of Galvani, very aged, but, stimulated by his desire to make known to the world what he thinks will be of great utility, he has left his home to traverse Europe, and demonstrate the powers of his apparatus. The observations of Mr. Faraday were received with repeated marks of approbation; the feat performed by the Chevalier's attendant was in like manner loudly cheered.—*Literary Gazette.*

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Femoral Aneurism.

THURSDAY, Jan. 14th, Mr. Key performed an operation for tying the femoral artery of a man 43 years of age, in a case of aneurism. The aneurismal tumor, which was about the size of a hen's egg, was situated at the lower and inner part of the left thigh, a little above the knee; apparently where the artery was about to perforate the adductor magnus muscle to reach the popliteal space. The patient was placed in a recumbent position on a table, and the sartorius muscle put into action by placing the leg in the tailor's position. The operator, sitting on the left side of the patient, began his incision rather above the middle of the thigh, making the cut in a direction from below upwards, to the extent of about two inches, on the inner edge of and with the oblique direction of the sartorius; in this part of the operation he divided the integuments and superficial fascia, and exposed the fibres of that muscle, which was next raised and drawn to the outer side, and by clearing away the cellular membrane and fat with the handle of the scalpel and a director, he exposed the femoral sheath: this was now opened carefully with the point of the knife, and the artery freed from the surrounding cellular membrane, and accompanying vein and nerve were brought clearly into view. An aneurismal needle, armed with a silk ligature, was introduced underneath the vessel, in a direction from within outwards; the needle afterwards withdrawn, and the ligature tightened around the vessel; the edges of the wound brought together by strips of adhesive plaster, leaving a space in the centre for the passage of the ligature. Mr. Key ordered a thick worsted stocking to be brought, which was put on the leg of the limb operated upon, and afterwards both were wrapped in a blanket, and the man removed to his bed.

This patient was admitted into the hospital on the 4th of January, when he complained of a sensation in the leg, which he said he could not compare to any thing but that of boiling water poured upon the limb, and which continued till the operation was performed: he was not aware of the existence of a tumor until it was found out by one of the dressers, at the time he applied for relief from the scalding sensation in the leg. Two days after the operation he complained of a slight pain in the head; he had a pulse quick and rather full, with hot skin; these symptoms, however, left him after the operation of a dose of castor oil. With respect to the limb, he said he felt quite comfortable.

Feb. 2d.—The tumor has nearly disappeared; the ligature is not yet come away, but he continues in other respects quite well.

SUSSEX COUNTY HOSPITAL.

To the Editor of the London Medical Gazette.

SIR,

If the following case be worthy of your attention, the insertion of it in your valuable Journal will once more oblige,

Your obedient Servant,

GORDON GWYNNE.

Jan. 31st, 1880.

*Case of severe Concussion of the Brain—
Recovery.*

John Churchyard, coachman, aged 30, was admitted Jan. 17, under the care of Mr. Lawrence, having just been precipitated from his seat whilst driving rapidly down a descent. There is severe concussion of the brain, and a fracture is supposed to exist in some portion of the base of the skull. Blood, of an arterial color, oozes from the left ear. The respiration is oppressed, but unaccompanied by stertor; there is coma and great contraction of the pupils; the countenance is pallid, and the extremities are cold; the pulse is slow and irregular.

Habeat Ammon. Carb. gr. x.

Aq. Camph. ℥i. statim.

Mixt. Cathart. 6tis horis.

The head to be shaved, and cold lotion applied; sixteen ounces of blood to be abstracted as soon as reaction supervenes.

Jan. 18.—Has passed a restless night, with delirium and vomiting; the latter has occurred at intervals during the day. Pulse 80; tongue clean; bowels constipated. Reaction took place this morning, and ℥xvj. of blood were taken from the arm, which reduced the pulse to 70; complains of severe pain over the forehead, which impairs his sight; blood ceases to escape from the ear.

Mist. Efferves. 4tis horis.

Hydr. Subm. gr. hac mane.

Omitt Mist. Cathartic, Cont. Lotio. Capiti.

19.—Has passed a better night, but with occasional delirium. Stomach less irritable; complains of giddiness and dimness of vision. Two dejections from the calomel; tongue furred and dry; great thirst; pulse 100; head still very painful. There is a good deal of irritation about the diaphragm today, which excites troublesome coughing; the blood taken yesterday buffed and sizy.

V. S. ad ℥xvj.

Enema ex Ol. Terebenth. et Sulph. Magn. instant.

R. Hydr. Subm. gr. xij.

Pulv. Zingib. gr. vi.

Ol. Crotonis gtts. ii. M. et fiant. Pulv. iv. St. 4tis horis.

Cont. Mist. Efferves. et Lotio. Capiti.

20.—A restless night from irritating cough; complains of severe pain of the head, and slight dimness of sight. Bowels

freely opened after the enema; stomach quiet; relieved for a few hours by the bleeding; blood inflamed; pulse 96; tongue less furred; thirst still great; skin moist.

Omitt. Mist. Efferves.

V. S. ad ℥xvi.

Mist. Salina Aperiens 4tis horis.

Hirudines xij. temporibus.

Cont. Lotio. frigid Capiti.

R. Hydr. Submur. gr. ij.

Ext. Calo. Comp. gr. vj. ft. Pil. ij. H. S. S.

21.—Pain of the head relieved by the bleeding and leeches; has passed a more tranquil night; pain of the head still severe; mental faculties disturbed; answers the questions put to him incoherently; tongue dry and slightly coated; lips parched; bowels open; skin moist.

Hirudines xij. temp.

Cont. Mist. Aperiens. et pil. ex. Coloc, H. S.

22.—Temporary relief from the leeches; has slept during the night, but complains this morning of pain extending across the base of the skull, which affects his sight, and also of pain along the course of the spinal cord; pupils sensible to light; countenance expressive of cerebral derangement; pulse 100, and wiry; tongue clean, but very dry; bowels open; skin moist.

Detrahantur ex Arteria Temporalis sanguinis ℥x.

Cont. Mist. Aper. et pil. ex Colo. C. H. S. Haust. Cathartic, cras mane.

23.—Great relief from arteriotomy, and is in every respect better; passed a good night; bowels open; tongue coated; pulse 88, soft.

To have snow applied to the head.

Cont. Mist. et pil. sequentes 4tis horis.

R. Hydr. Submur. gr. iij.

Pulv. Antim. gr. iij. M. R. pil.

24.—Slept well; complains of a buzzing noise in his ear, which he compares to that of a bee; frequent inclination to dose; tremor of the limbs; pulse 88, with a slight fulness.

Hirudines tempor. xij.

Cont. Alia.

25.—Mouth affected by calomel, which is to be discontinued; still pain in his head, but not so severe; bowels well open; feverish symptoms abated.

Hirudines xij. temp.

27.—Obvious improvement; all alarming symptoms have disappeared.

Cont. Remedia.

31.—Convalescent.

Comment.—The above case, though by no means uncommon, is still a highly in-

structing one. The various symptoms, indicative of concussion of the brain, as well as of those of consequent reaction, were well exemplified. We have, in this instance, ample proofs of the success of that *well-timed* energetic treatment, which should always be resorted to in such cases : and at that *period* when reaction establishes itself. As soon as the effects of the mercury evinced themselves, decided amelioration of all the symptoms succeeded ; certain symptoms presented themselves which seemed to justify the supposition of the existence of fracture at the base of the cranium—in the event of which, effusion must have taken place into this cavity—the removal of which may we not attribute to the early administration of calomel ? a remedy highly beneficial under such circumstances. G. G.

SWANSEA INFIRMARY.

Labour, with attachment of the Placenta to the Os Uteri.—Transfusion performed.

By MR. G. G. BIRD.

THE subject of the following case was a middle-aged woman in this neighbourhood, who was so greatly exhausted from hemorrhage that she appeared in a dying state ; she had had repeated floodings for a fortnight before I was sent for, and for a few hours previous to my visiting her it had become so profuse that she could scarcely speak, and had a sunken and pallid countenance, with a very weak and rapid pulse. On examination, I found the placenta attached to the os uteri ; I immediately delivered her, when the uterus contracted and the bleeding ceased ; but she was still further exhausted ; upon which, with the concurrence of my friend Dr. Gibbon, of this town, who kindly gave me his assistance, about four ounces of blood procured from her husband's arm, were transfused, with a very apparent and decided benefit. She went on quite well for some days, when an attack of phlegmasia dolens interrupted her convalescence, but she recovered, and has done perfectly well, though she remained weak for some time.

The instrument used was Read's apparatus ; the only difficulty experienced was some degree of ecchymosis in the arm, which came on about the close of the operation, and arose probably from my not being at that time accustomed to use the instrument, added to which, the room we were in was dark and inconvenient.

KIDDERMINSTER DISPENSARY.

Case of Aphonia.

JUNE 23, 1829.—This morning, James Milward, a weaver, aged 34, while at breakfast, was affected suddenly with a trembling, attended by a feeling of coldness and numbness, from the pit of the stomach up to the

throat, and soon afterwards it was found that he could utter no sound, although the lips and tongue could be moved with the usual ability. He is perfectly sensible, and answers negatively or affirmatively, by a motion of the lips. He can swallow with perfect ease. He has, by turns, heats and chills, and when the former occur a diffused rash arises about the extremities, and the face is at the same time flushed. The pulse is moderate, and about 88. All parts of the interior of the mouth and fauces are natural, except that the tongue is thickly coated and white. The evacuations are reported to be healthy, and no complaint of pain is made, except that he has a headache, which has affected him for two days. The countenance expresses the most intense anxiety.

About ten weeks ago the patient was much troubled with tape worm, from which he was relieved by medicine, and his health was good until the present occasion. He cannot attribute his complaint to any cause whatever. He has the appearance of poverty and hard work. *Temporibus. applic. hirud. xij. sumat 3tis horis. mixt. assefortidæ, 1 oz.* He had already taken a powder of calomel and jalap.

24th.—Headache relieved ; anxiety diminished ; other symptoms unchanged. Medicine operated, producing watery evacuation. A large blister ordered between the shoulders, with a cold lotion to the head, and pills of calomel and colocynth.

25th.—No headache ; bowels costive, but relieved by the pills.

27th.—His general health gradually improves ; bowels strongly affected by the pills. In the middle of the night he awoke from a terrible dream, and spoke faintly in a whisper. From this time till the second of July he spoke faintly and in a whisper. Cathartics were used, from the idea that the alimentary canal was the part to which all the mischief was to be attributed, and carbonate of ammonia in solution, with a bitter. During this treatment, great quantities of very foul, dark, and offensive matter were voided. The man gradually improved, and was discharged in a fortnight cured, and without any remains of his complaint except weakness of voice.

Being aware of the man's having had the tape worm, I attributed the attack to some cause of irritation in the bowels from the first, or to tape worm. But I thought it was justifiable to attempt to relieve the pain in the head by leeches, as he seemed excessively annoyed by it, and could get no sleep. The leeches entirely succeeded in the object, and left no debility or other ill effect behind*.

* This and the preceding case are taken from the Midland Reporter.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 13, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

By WILLIAM LAWRENCE, F.R.S.

LECTURE XX.

Bites of poisonous Serpents.

I MENTIONED to you, gentlemen, in my last lecture, that hydrophobia could only be produced by the application of saliva from rabid animals to the recent wounds of others. You may probably have inferred from this statement, though I did not specifically mention it, that the saliva of a rabid animal does not act in producing the disease in any other way. For example: it may be applied with impunity to the entire surface of the skin—to the skin covered with its cuticle; and that the same may also be applied with impunity to the surface of the mucous membranes. It does not produce any disease under either of these circumstances.

A very active poison, and one capable of producing very serious effects on other animals through the medium of wounds, is that effected by certain serpents. In this respect the serpent tribe constitutes two divisions. There are some of them that are quite innocuous, and there are others that secrete this peculiarly virulent poison, which, when applied to a recent wound in the human species, or any other animal, produces effects as fatal as those that take place in hydrophobia; in fact, the effects in the latter instance—that is, from the bites of venomous serpents—are produced more immediately. The same interval of time which is observed in the case of hydrophobic poison does not take place in the instance that I am now alluding to.

In the venomous serpents there is a glandular apparatus in the neighbourhood of the jaw which secretes the poisonous or acrid fluid. The duct of the gland runs through

the centre of what is called the *poison fang* of the serpent. The poisoned fang is a broad, long, and sharp-pointed tooth, which is hollow internally; and in fact the hollow runs from the excretory duct of the poisonous gland, so that when the serpent bites, the secretion of this gland passes through the fang into the wound. In this particular you find there is a marked difference in respect to the teeth of the innocuous serpent and those that are poisonous. In the engraving which I now send round, the lower figure represents the head of a boa constrictor, a large serpent, which is innocent; in the upper jaw you observe four rows of teeth, parallel to each other, two towards the palate, and two towards the edge of the mouth. In the upper figure, which is the head of a rattle snake, you will find only two of these rows of teeth—namely, the palatine teeth, and on the other side there is simply a large tooth projecting from the anterior part of the mouth, which is the poison fang; so that if you could see the teeth of the serpent, you could distinguish whether it was an innocent or a poisonous one. But so far as the inquiry goes, this is no good criterion—we cannot take hold of the serpent, open its mouth, and examine its teeth. (A laugh.)

There is a considerable variety of venomous serpents. The head of the serpent represented in the upper figure is that of the rattle snake—it is the one that is best known. That serpent is found extensively on the continent of America, and its venomous power is very considerable. In the East Indies there are several varieties of serpents that possess the venomous power in a considerable degree; the one that is more commonly known is called by the English the *spectacle or hooded snake*, from an apparatus behind the head that readily swells out. There is a mark on the back similar to a pair of spectacles, and this part of the animal, when it is enraged, swells out something like the shape of a hood. It is the cobra di capello of Linnæus. In the West Indies, particularly at Martinique, there is a venom-

ous serpent which is called by the English the *yellow* or *spotted snake*, and is called by the French *grand vipère fer-de-lance*, the *coluber carinatus* of naturalists. In this country we have only one serpent that has a venomous property in any degree—it is called the *viper* or *adder*, for these two names are applied to one and the same animal. It is the *coluber berus* of Linnæus. I believe the animals I have now mentioned, and some of the East India serpents, particularly the cobra di capello, are the most venomous—that is, their poison acts most speedily in depriving other animals of life. In some experiments that have been made with the spectacle snake, a fowl bitten by the serpent has died in the space of half a minute. The bite of such a snake has sometimes been fatal to a dog in the space of half an hour; but it requires perhaps the space of some hours to produce fatal effects in a human subject. I fancy that in none of the instances that have been mentioned can it be considered that the bite of these snakes is invariably fatal to the human subject, for there are diversities in respect to the activity of the venom. The bite of the serpent has different effects, according as it has or has not bitten previously: supposing the animal to have been kept some time, and not bitten before so as to exhaust the venom, it will produce a greater effect than if it has already bitten any other animal. At certain seasons of the year the poison is more active than at others. In the poison of venomous serpents, the same conditions are necessary to its activity that I have mentioned in hydrophobia—the poisonous fluid must be applied to a recent wound. The poison of the viper, or of any other of the serpent tribe, may be taken into the stomach with impunity; and it may be applied with impunity to the surface of the body. The bite of a single viper will deprive a pigeon of life very quickly; but one bite will by no means exhaust the whole quantity of poisonous matter that is contained in the excretory duct of the gland; yet you may take all the poison that can be collected from ten vipers, moisten it with bread, and give it to a dog, and it will produce no deleterious effects. In the same manner a student that assisted in an experiment of this kind took some bread moistened with all the venom that could be extracted from four large vipers, and it produced no ill consequences whatever. It is necessary, therefore, that the poisonous fluid should be applied to a recent wound, for no other application to the body will produce any deleterious effects. In the experiments that have been made on animals, it has sometimes been found that dogs wounded with lancets, on which the venomous matter had been placed, received no injury; while, if they were bitten by a serpent of the same species, all the symptoms usually produced by such bites took place.

The bite of a poisonous serpent causes considerable pain in the part that is bit, which soon swells; this swelling extends (supposing the bite to have taken place on any of the extremities) towards the trunk, while the bitten member becomes considerably enlarged. The part not only becomes swelled, but hard; and if the individual or animal survive, the part will turn livid, vesication will take place, and the surface will mortify. In the further progress of the injury, the cellular texture of the limb that is bitten will pass into a state of inflammation and suppuration—in fact it will assume nearly the same state as a limb in which phlegmonous erysipelas has occurred. At the same time that these local effects are produced, a very serious sympathetic influence is exerted upon the heart and circulation, as well as upon the nervous system. The pulse is depressed, becomes irregular and intermitting; vomiting occurs, the patient is sick and perhaps rejects the contents of the stomach. Paralysis is sometimes produced—the patient or the animal is unable to move—the extremities become cold—the power over the voluntary muscles seems to be lost—vision is impaired—in fact, serious injury is experienced in the function of the nervous system, and under these more general effects death very speedily ensues.

In the treatment of injuries of this kind, the first object, of course—if the wound be seen at a sufficiently early period—is to prevent the passage of the poison from the wounded part towards the centre of the circulation. Hence it is of consequence to apply a ligature between the situation of the wound and the heart; and if this be done very early, the occurrence of the symptoms that I have just mentioned will be prevented. It seldom happens, however, that the case is seen at a sufficiently early period to admit of this mode of treatment; and of course if a ligature be applied, supposing the swelling to have already occurred in the limb, we might aggravate the symptoms instead of relieving them. The application of a ligature to prevent the absorption or transmission in any other way of the poisonous influence to the centre of the circulation, and through it to the nervous system—that mode of treatment can only be adopted in the earliest period after the wound has been inflicted. It has been found by recent experiments, that if poisons are applied to fresh wounds, and if you apply a cupping glass, so as to take off the pressure of the atmosphere, that the absorption of the poison is prevented; therefore if you have an opportunity of doing it, the application of a cupping-glass over the seat of the wound would be advantageous in cases of this kind.

Supposing you have no means of applying the methods that I have now mentioned, you might have recourse to the general me-

that I have pointed out in speaking of hydrophobia—that is, you may apply copious ablution, to remove the venomous matter from the wound; you may cut away the surface of the wound: at all events you may scarify it, so as to expose the surface, and thus give free scope to the means you employ;—or you may cut away the wounded part, so as to remove from the body the immediate source of the symptoms—that is, the poisonous matter.

Such are the local means that may be adopted in cases of this kind. With respect to the general measures, the symptoms that come on are so serious, and the rapidity of their progress is so considerable, that you have little time for delay: you must select means powerful in their influence, and such as you can employ quickly. Now general experience has shewn that means of an active stimulating kind are the best adapted to the symptoms; indeed, when you see the depressed state of the circulation, and the powerful depressing effects which are produced on the nervous system, you must conclude that measures of a stimulating kind are most likely to be advantageous. It is generally found that volatile alkali exhibited internally has the best effects of any preparation of that kind, and it may be given tolerably freely under such circumstances. It has also been supposed that this may be applied with equal advantage to the wounded part, though I think about this point there is some doubt. A preparation that has been called *eau de luce* has been considered very efficacious in the case of bites of venomous serpents. This is pretty generally used by the French. It is a preparation of volatile alkali with some other ingredients. In the East Indies, where venomous serpents are numerous, and where their bites are serious, a preparation of that country, which is called *Tanjore pills*, has acquired great celebrity, and it has been found that the most active ingredient in these is arsenic—which, in fact, they contain in a great quantity. Some English surgeons, adopting this hint, have applied arsenic freely in cases of bites of venomous serpents, and in one of the volumes of the Transactions of the Medico-Chirurgical Society, there is a series of cases related by an English surgeon, who had an opportunity of observing several instances of this kind in the West Indies, where, I suppose, the animal that inflicted the wound must have been the yellow or spotted snake. Mr. Ireland has exhibited two drachms of Fowler's solution in a draft, and has repeated this dose every half hour for four hours. He has related a number of cases in which this very bold treatment seems to have had the best effects—I say it is *bold* treatment, because two drachms of the solution in question contain, I believe, a grain of arsenious acid, and I think we do not

begin in the administration of that remedy usually with a larger quantity than five or seven drops.

A case of the bite of a rattle-snake occurred in this country some years ago. A person who took care of some animals that were carried about for exhibition, received one or two wounds from a rattle-snake which formed a part of the collection, and the individual was taken to St. George's Hospital. His case is related by Sir Everard Home, in a paper in the Philosophical Transactions in October, 1811. But according to that case, it would seem that the bite of a rattle-snake is not so venomous as we might have supposed; for he lived fourteen or sixteen days from the receipt of the injury, and then died from the effects of general inflammation and swelling of the cellular membrane of the arm—the effects of what might be called phlegmonous erysipelas of the extremity.

In this country, however, we have not much opportunity of seeing the bites of venomous serpents in a dangerous shape, or of putting in practice any of the principles that I have now detailed to you. The only poisonous serpent in this country is the viper, or adder, and the venomous power of it is so feeble as not in general to endanger the human subject. The smaller animals may be killed by the bite of a viper, but it does not kill a dog; it requires three or four active vipers to destroy a dog, and of course the human subject is not in general endangered by it. You must, however, observe that the local effects of the bite and the disturbance of the circulating, digestive, and nervous systems, in consequence of the poison of the viper, will occasionally prove serious even in the human subject; and in some instances have proved fatal when the injury has taken place in young persons.

Wounds received in Dissection.

In the division of poisoned wounds I have marked down in the syllabus of these lectures injuries received in dissection?—with a query, a note of interrogation; and I do this in order to express the doubt which I feel in my own mind, whether the effects of such injuries be owing to the introduction into the human frame of a poison or not. It seems to me very doubtful in this case, whether any thing that can be called virulent or poisonous is introduced into the human frame by these occurrences, or whether the effects are to be explained as resulting from such injuries considered mechanically.

If these be poisoned wounds, they certainly follow other laws from what we observe in those cases of poison that we are intimately acquainted with. If we look at the small pox, cow pox, scarlet fever, or syphilis, we see that the application of poison produces pretty regularly certain effects; that

they will take place within a certain time, that they exhibit a certain character, and that you can before-hand ascertain pretty clearly the symptoms and course of such injuries. But we can give no such description of the injuries that arise from dissection;—if they arise, therefore, from poison, it is one of an uncertain, and we might almost say, capricious kind. In the first place, in a great majority of instances, no injurious effect is produced from wounds received in dissection;—there are hundreds and hundreds of these wounds occurring without any injurious consequence. It is only in a very small proportion out of the whole number of such wounds, that any prejudicial effects are produced upon the human frame. We can, perhaps, quite as well explain the occurrence of these effects when they take place, by the state of the health of the individual in whom the phenomena occur, as by any peculiar virulent property that may be applied in these cases. Now it has happened to me to meet with cases where wounds have taken place in dissection, and where a person has cut himself hundreds and hundreds of times when he has been in a healthy state of body, who has afterwards died under a like disease. I never experienced any ill effects but once, and then I was in a bad state of health. I had an inflammation in the finger, and subsequently a swelling of the glands in the axilla, with induration. There are a certain number of cases—but very few compared with the whole—in which undoubtedly serious local effects are produced, and in which serious general symptoms occur.

It is, perhaps, rather a question of curiosity than one of direct practical consequence, whether these effects arise from a poisonous matter communicated to the part, or whether they owe their origin to the particular state of the individual at the time the wound is inflicted.

In the first place, we cannot point out any particular state of a subject, or any condition of previous disease, that will certainly give rise to any sort of symptoms in these cases. Indeed we shall see that an individual gets a prick or a cut in the dissection of a certain subject, and suffers serious consequences from it, while others, who have had to do with the same subject, suffer no injurious consequences at all. Thus in the majority of instances, the effects produced are such as would seem to arise in wounds considered in themselves, without any reference to the virulent state or decomposition of the bodies in the dissection of which they occur. Inflammation comes on in the part that is the seat of the wound; suppuration may take place; the absorbents may become inflamed, and the absorbent glands, from which these vessels lead, may participate in the inflammation; the cellular sub-

stance of the part also becomes the subject of inflammation; and thus, perhaps, it is seen generally, that phlegmonous erysepelas is produced. This condition is a serious one; it is capable in itself, without any suspicion of poisonous properties in the cause that produced it, to give rise to very serious local, and equally serious general symptoms. Thus a great majority of the cases in which serious symptoms arise, admit of explanation on ordinary principles without the suspicion of any poisonous property in the immediate cause. The question, therefore, respecting the existence of poison, is confined to a few cases, in which some particular local or general symptoms are produced.

With respect to a great number of the ordinary cases, I think there can be no doubt in referring the phenomena they exhibit merely to the effects of the wound, considered as a cause of local inflammation. There was a gentleman, formerly a pupil of this hospital, who wounded his thumb in sewing up a body. It was the body of a female, who died of some disease in the peritoneum, and I believe he was hardly aware of having injured himself. However, in the course of the night after he received this injury, he experienced very severe pain in the part, (he might have scratched himself slightly, but he felt nothing till night) and became extremely unwell. When he awoke in the morning he sent for a medical friend, who found him in a state of great excitement. He was a robust and hearty person of full habit. His friend found him with a full, hard, and strong pulse, and with considerable swelling about the part in which the injury had been received—a swelling extending from his hand to the fore-arm generally. He was in a state of extraordinary agitation and restlessness—his nervous system was so much disturbed that he could hardly keep himself quiet. He was in a state, in fact, which called for active depletion; it was adopted, and he lost thirty ounces of blood with considerable relief. He was better the next day, but still the upper extremity generally was swelled. The absorbents leading from the thumb along the fore arm, and the absorbent glands in the axilla, became inflamed. He had pain in the head, and the nervous symptoms continued to a great degree. He had leeches applied to the head, and cold to the part injured, and purgative medicines were administered. On the following day, all the symptoms were worse; the limb was more swelled; the inflammation of the absorbents and glands was more obvious, and all the symptoms more severe. I saw him on this day; he fancied from the swelling of the ball of the thumb on which the injury was received, that there must be matter, and he wished it to be let out. A deep incision was made, and a little matter

did flow out. The hand was enveloped in a warm poultice, and he received considerable relief. Now the incision was deep, and when the limb was enveloped in the poultice, he lost, without being sensible of it, thirty ounces of blood, and seemed better in consequence of this loss. However, the swelling of the fore arm and upper arm continued, and rather increased, while the nervous symptoms went on in a greater or less degree. On the following day, in consequence of the continuance of these symptoms, he lost blood twice, and had a quantity of leeches applied to the hand, fore-arm, and upper-arm;—indeed he found that was the only way in which the excessive suffering and tension of the inflamed tumefaction could be relieved; so that, without knowing their quantity, he took a handful of leeches, and when they dropped off he put on another—and in the course of twenty-four hours 200 leeches were applied to the upper extremity. By this means the inflammatory action was pretty effectually reduced, and after three or four days of this treatment he found himself exceedingly exhausted. Mr. Gordon was with him, and a remarkable change took place in the symptoms. He became pallid in the countenance, cold in the extremities, the action of the heart was so enfeebled that he appeared as though he were about to die. Under these circumstances, Mr. Gordon gave him opium, which relieved him; he then continued exhibiting opium till the symptoms were removed;—and under the exhibition of the medicine in this way, he gradually recovered. Now in this case we can see nothing more than a local effect, producing high inflammatory action in an individual whose constitutional derangement may have occasioned that disturbance. We see in the treatment depletion, with the loss of a great quantity of blood, locally and generally, and the effect of this in controlling the inflammation. In this case we do not want the action of poison to explain the symptoms that occurred in it.

There are other instances in which the general and local disturbances have been different from the above; and it is in them principally that the explanation has been adduced, by which the agency of poison is supposed to be concerned in these cases.

There was a physician in the neighbourhood of London who examined the body of a woman that had died from puerperal peritonitis. At 8 o'clock on the morning of the 28th of December he assisted in sewing up the body, and he was not aware that he had injured himself. At 8 o'clock on the evening of the same day, being then dining in company with a friend, he felt a stinging heat and uneasiness at the end of one of his fingers, and he thought he might have wounded himself. On looking at his finger, a slight blush was observed; and when the part was

examined, a slight opening was perceived, so that the inference was, that he had injured that part of his finger in sewing up the body. He thought he would try nitrate of silver, and he also put upon it a small quantity of nitric acid, that having been his habit as a matter of precaution. These applications were unattended with pain. He went home, and finding the finger still uneasy, and as the former applications had not given him any pain, he again applied nitrate of silver to the part, continuing the application till he felt it sensibly. The pain thus produced soon increased to a high degree of agony. Shivering came on, and he passed a restless and turbulent night; and when he was seen early in the morning, red lines had formed along the back of the hand. At 8 o'clock on the morning of the 29th, (he had opened the body at 8 o'clock on the 28th of Dec.) an eschar was observed the size of a pea, which was supposed to have occurred from the nitrate of silver. Leeches were directed for him, fomentations, and aperient medicines. About 1 o'clock on the same day, that is, the day after that on which he had opened the body, the finger in question seemed swelled, with a livid appearance; and the pain being very considerable, his medical friend, who saw him, made an incision through the integuments down to the bone, and by so doing he found the two last joints of the finger had mortified. The last and middle phalanx of the finger were already in a state of gangrene;—red lines were formed along the back of the hand and arm up to the elbow, and uneasiness was felt in the axilla. At this time he experienced complete prostration of strength; he felt himself as weak as a child. There was irregularity of his breathing; a sort of torpor about his arm; his pulse from 90 to 100, and soft. During the rest of the day he had much heavy kind of sleep, with intervals of severe pain; the hand and arm swelled, but not very considerably. The absorbents inflamed along the hand, and the axillary glands swelled, and great torpor was experienced, with difficulty of breathing. Swelling took place in the axilla and at the side of the chest, and openings were made in those situations without giving vent to any matter. He died at 6 o'clock on the morning of the 1st of January, which was on the fifth day after opening the body. Now, in this case, there is a remarkable local effect produced; that is, mortification in the part on which the injury had been received—and a serious influence exerted on the animal economy, by which, in four days, death is produced in an individual previously healthy.

A gentleman, a few years ago, who was a dresser at this hospital, opened a patient in the course of the day. He was not very exemplary, I believe, as to his mode of living,

but indulged in the pleasures of the table ; in short, not quite a pattern as to regularity. He got merely a prick on one of his fingers. On the same day that this took place, he had a large party of friends at his house, and he drank very freely. In the course of the night he was awoke by excessive pain in his finger, and before the middle of the following day, the last phalanx of the member had mortified. There was a swelling of that part of the hand and of the limb generally. Inflammation of the absorbents and the absorbent glands took place in this gentleman, with considerable fever. Subsequently, general inflammation of the skin and cellular membrane, that is, phlegmonous erysipelas of the hand and forearm, occurred. He was in a state of great danger, but by making a large incision through the inflamed part of the skin and the cellular membrane, he recovered.

Now it must be observed in the first of these two cases, that of the physician who examined the body and died in four days, and in many other of the most serious cases that have occurred, the injuries have been received in the examination of patients who have died from inflammation of the peritoneum, and more particularly from puerperal peritonitis, so that if a poisonous influence is communicated to the body, it would seem to be most generally produced in instances of that kind. Here we have the conflicting result of these two cases. We have the instance of one individual in whom mortification takes place at an early period, as the result of injury, who dies ; and another instance in which mortification occurs, and recovery takes place.

Now as to the occurrence of mortification consequent on the wound, I do not deem it to be a sufficient proof of the application of poison. I remember a butcher's boy who was brought to this hospital and placed under my care, who had a hook stuck in his hand, and which tore out its way so as to make a triangular flap on the palm of the hand—a sort of flap that we entertained no doubt would, by keeping it down, unite with the subjacent parts. But the flap mortified, although the injury had been produced merely by an iron hook ; so that the mere consequence of a wounded part going into a state of mortification does not prove that poisonous influence is exerted, nor does it appear to me that in this case the general system exhibited the peculiarity that leads us to infer that poisonous influence took place. We merely see in this case that sympathetic influence of the circulating and nervous systems which may be produced by inflammation in a particular state of health, which in one individual will terminate fatally, and in another recovery will take place : so that we have no sufficient ground in any of these cases that poison is communicated

to the frame, and from the evidence now before the public, I remain in doubt as to whether there is any poison in the case or not.

I am aware that animal substances in certain states of decomposition, are capable of producing a directly deleterious influence on the human frame. I have already had occasion to mention, in speaking of mortification and diseases of that kind, such disturbances as malignant pustule, where mortification of the surface takes place. This is a kind of effect not so often seen in this country as in some others, where it is observed among the butchers, who have the flaying and cutting-up of animals in a putrid state, which exerts this influence often to a fatal degree. That particular effect is described more minutely by Professor Delpech, in a work, entitled "Treatment of Surgical Diseases." We have not much opportunity of seeing it in this country, but in those instances there is a certain form the disease takes—a particular course which points out the operation of certain and peculiar causes ; but we do not see this regularity in those serious occurrences which occasionally arise from dissection.

Now, with respect to the practical rules for the management of these injuries, some persons adopt the plan of touching any wound of this kind with nitrate of silver. I should suppose it is a safe and unobjectionable mode of proceeding, and that in the case of a slight wound or puncture in dissection, there can be no harm in washing the part and touching it with nitrate of silver, which is likely to destroy any injurious influence that might otherwise take place. Some have recommended washing the surface of the wound with oil of turpentine, which might have a similar result. These are means of a preventive kind. If any inflammation should come on, then I conceive it would be necessary to keep the wounded part at rest, and to foment or poultice it—that is, to apply a soothing application to it. If there were symptoms of decided inflammation, to take blood from the part by leeches, to take means to evacuate the alimentary canal, and to pursue those measures until the danger should have gone by. If more considerable inflammation should have come on, and if matter should have formed, then I should consider it advisable to open any such collection of matter freely. In those cases where inflammation, swelling, and any thing like the formation of matter should occur, in addition to that in the seat of injury—that is, for example, in cases of a wound of the finger or hand, where redness and swelling occurs about the axilla or chest, if any thing like the formation of matter should be observed, I think the best course of proceeding would be freely to open the part. The danger in this case is of the inflammation increasing and spreading

to the cellular membrane of such parts. When it does so, we know very well that there is a want of tendency to limit the inflammation; that such inflammation is apt to creep on, and affect the surrounding parts to a great extent; that it does not limit itself to one circumference; that it does not tend to come to the surface, and therefore a free incision throughout the affected part is, according to present experience, the most advantageous mode of treating such occurrences.

As to the constitutional disturbance that may ensue in conjunction with these local symptoms, generally speaking, it is of an inflammatory character; and it must be treated by antiphlogistic means, according to the extent of the disturbance.

On the whole, I confess I do not regard these cases with any thing like the feelings of alarm that some persons do. In a great majority of instances, if a proper degree of attention is paid, they terminate very favorably. I do not conceive that, generally speaking, they are cases that should give rise to alarm, or be looked upon with apprehension. I acknowledge that I am rather inclined to discourage, as much as I can, the idea of a poisonous nature attached to these wounds, because I conceive that the opinion produces much alarm. I do not, however, argue against their poisonous nature from this notion, but I give you my opinion formed from a consideration of the phenomena, independent of any view of that kind. I am, however, certainly glad that I arrive at this conclusion, because I conceive that any other opinion would lead you to prosecute your anatomical studies with greater anxiety.

I should also say that there is not the fear of communicating the peculiar disease to yourselves, in dissections, of which the persons may have died. Although the venereal disease is capable of communicating infection during life, we do not know of its communicating any noxious effect to the body by dissection after death. With respect to cancer, fungus hæmatodes, and all that class of complaints, we have no knowledge of any effect communicated to the human body from the dissection of persons laboring under such affections. I mentioned to you, that in my own person I only once experienced any inconvenience from a wound contracted in dissection, and that was in opening the body of a person who had died from cancer of the stomach. Now in that case, it happened that the patient was hardly cold when I wounded my fore-finger in sewing up the body; and a very considerable swelling of the axillary glands came on, with great induration. One of my medical friends made a long face, and I found that he conceived that the glands of the axilla had taken on a scirrhus character, in conse-

quence of the disease in the stomach of the patient I had been examining. He mentioned this idea to another gentleman who was with me, under an injunction not to mention it to me, lest it should alarm me. However, this injunction was not observed, and we had a hearty laugh over it. I had no idea of danger, and there was no ground for apprehension.

I may state, that in examining patients who have died from fungus hæmatodes, scirrhus, or the venereal disease, I do not know of any poisonous principle communicated to wounds received on such occasions. There may, however, perhaps be some exceptions to this general observation. There are some instances recorded, of individuals who have received wounds, either in the examination of animals dying under particular states of disease, or in administering during life to these animals: for instance, to glandered horses. There are instances of individuals who have received wounds upon their hands, under such circumstances, in whom a particular train of symptoms has arisen, one circumstance of which has been the formation of abscesses upon various parts of the body. It has been found that the matter of such an abscess has been capable of communicating to other animals—that is, to horses, or asses, the glanders; and there appears to be a possibility of conveying, from such a wound, the malevolence of the peculiar poisonous principle to the human frame.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tne à allonger ce que le lecteur se tue à abrégér.”—D'ALEMBERT.

Sketches of Intellectual and Moral Relations. By DANIEL PRING, M.D. Member of the Royal College of Surgeons, London.

DR. PRING, of Bath, has long been known as an author who delights in handling subjects of deep and abstruse research, and as disposed to devote the labor of thinking to physiology, while others investigate the truths of that science experimentally. Such writers are doubtless of great utility—the experimentalist and the mere reasoner mutually checking and controlling each other; for it is better that discoveries should be critically canvassed by others, than left entirely to those constructions which their originators may be induced

to put upon them. It is true the closet is not the place, nor the pen the means by which physiology is to be improved in the first instance, yet are these, perhaps, ultimately the source of its perfectibility—the learned, acute, and practised reasoner, often detecting the errors, as well as displaying to advantage the facts of the manual laborer, which might otherwise have been neglected.

Dr. Pring first appeared before the public as the author of a short Essay upon the Absorbents, published in the city of his adoption; and he then turned his attention to the nervous system, in a small work, entitled “A View of the Relations of the Nervous System in Health and Disease,” founded upon an essay which gained the Jacksonian prize in 1818. The author’s habits of study and reflection, to which his leisure has been much devoted, seem to have suggested a bolder effort, and, like Locke, he contemplated the human understanding in all its natural relations; the ultimate result of which has been a very abstruse and laborious volume, called “General Indications which relate to the Laws of Organic Life;” as part of an extensive plan, meditated by the author, “of making an analysis of relations for himself, both in the physical and moral departments.” The book now before us contains the completion of this plan, so long studied and slowly matured. The delivery of these two works, however, seems to have been by no means equally propitious; for the first, we are informed, was accompanied by “a feeling of chivalry and confidence, such as arose from a first ardor and unbroken energies;” while the second was ushered into the world “with hesitation, diffidence, and apathy.” But, if it required “a first ardor and unbroken energies” to write the “Indications,” we are quite sure these are in requisition for those who read them. Indeed a more formidable volume has never appeared before us; and we well remember experiencing considerable “hesitation, diffidence, and apathy,” when it was published, and we proposed to examine its contents. Moreover, the dress in which the “Indications” appeared was highly repulsive, and a most disgraceful specimen to Callow, of “a getting-up” for 1819.

The present work is far more creditable in appearance, both as to type and

paper. As to his style, the author is rather given to quaintness and obscurity of expression; but the manner in which the present work is written is decidedly improved. It is, however, far too much spun out, and too abstruse to be generally pleasing among the members of a busy profession in a large and bustling metropolis, where literary brevity is so desirable. Dr. Pring seems to delight in playing with his points, and spinning a web of argument, which sometimes entangles his own opinions in its coils. Sometimes the author leads one to suspect him to be a materialist of the (now) old French school; at other times we find him open to doubts, acknowledging the difficulty always surrounding *physical* testimony, and even candidly confessing that *revelation* remains perfectly unshaken by physiological research, while, at the same time, it is equally barren of proofs regarding the separate and future existence of mind after the death of the earthly frame. We suspect, indeed, that it is with our author as with most others who set sail with a fair wind through the seas of metaphysics and infidelity—that they finally cast anchor in the harbor of revelation, and find, after all their pains, that they end where they began before the delusive lights of philosophy shed their early and imperfect rays upon their understandings. We may argue, and refine upon our arguments as much as we please, but we know nothing whatever of the mind farther than is to be derived from observations upon its physiological phenomena, during the limited term of life granted to living beings possessing more or less of the mental endowments. Thus we never feel disposed to object to the search being made, if it be made fairly, candidly, and without prejudice; and such, we must say, appears to be the state of mind in which our author has pursued his very extensive inquiries throughout; the basis of which, it appears, was laid very long before the superstructure was raised up, which accounts for the shades of difference which are manifest in the author’s opinions.

The work before us is divided into two parts; the first of which is devoted to the physiological history and connexions of the human mind, and the second to moral relations. The contents of the first part are, the origin of the mind; the relation of sensibility with the causes of

sensation; the relation of the mind with the organic life; the relations of the mind with the structures; and, lastly, a general account of the constitution, phenomena, and maintenance of the human mind. The second part contains a summary consideration of the moral constitution; the influence of moral beauty; the nature and influence of the moral sense; the nature and obligation of a sense of honor; the influence of political expediency; a general comparison of moral principles and obligations, and the principles and institutes of moral government.

Thus the reader is presented with the bill of fare of a feast of no ordinary intellectual character. The usual limits of physiology are exceeded, indeed, and the palings of moral philosophy and metaphysics are entered. In the second part of the work, even our monarchs and ministers may take a lesson in the art of governing, and the secretary of the home department imbibe some useful hints, in the chapter upon the principles and institutes of moral government.

But those who study this work must be among the early risers and trimmers of the midnight lamp, for it contains much matter for reflection, and is not very easy to be comprehended. The connexion between the mental and physical attributes is sketched with great ingenuity and thought, and the intellectual and moral state of man is placed in a point of view highly creditable to the author, as a physiologist and a moral philosopher who has derived advantages from modern discoveries and observations not known to Locke, who had therefore to depend more upon the resources of his own mind. In this point of view, indeed, we may admit the plan of Dr. Pring's work to be an improvement upon those which so successfully engaged the attention of the profound Locke, the elegant Shaftesbury, and the writers of this class, who, though few in number, are unrivalled in force and depth of reasoning.

It is now time that we should allow the author to speak for himself, although but a very small portion of his book can be either commented upon or quoted, consistently with our limits, and much highly interesting matter must be thus omitted, which, but for want of space, we should be disposed to analyse more minutely.

The opening passage of the work commences the chapter upon the origin of the mind in rather a suspicious manner: thus—"there is nothing in the mode of the origin of the mind, which is not common to the other properties of life, of which the structures are possessed." If we rightly understand this, it is as much as to say, that the mental and organic functions have a common origin, the result *both* of animal structures; and the author proceeds to prove this position accordingly, although, in our opinion, he only proves that the phenomena of mind and matter are so blended in animal life as to be attended and characterised by the exercise of a reciprocal influence, while their separate origin is still maintained. One would be led to suppose the mantle of the great champion of materialism had fallen upon the shoulders of our author, although subsequent passages shew it to be a false alarm. The author goes on to prove an identity between sensations and intellectual properties, arguing that organization is always derived from parents, and that the mind is attributable, like sensibility, which is a property of structure, to a parental source for its origin, the ovum receiving alike its future corporeal and mental qualities from maternal nutrition, which qualities also are subsequently preserved in the infant by its ordinary nutriment. "The being," observes the author, "who exhibits the possession of a mind is a production from parents; that he is *so endowed by an internal formation, the materials of which are furnished obviously from a parental source.*" He then goes on to shew, that as the sensible organs become matured, so are the mental qualities; and that as the one ceases, so does the other influence become suspended. All this we readily grant, but the *identical origin* of the mind with the properties of structures, even that in which it is particularly manifested, we think is not by any means proved. Wherever there is animal life there is more or less intellect, and it is certainly most developed where the organization on which it seems to operate is most elaborate. For example, where the cerebral convolutions appear mostly to predominate, there we usually discover the greatest degree of intellect, the cerebral mass bearing also a much greater relative proportion to the nerves than among the more powerful and ac-

tive beings, and those of large bulk. This is apparently only to be taken in a generally proportionate manner, in comparing one class or species with another, and by no means holds good in individual cases of the same species; for the gross mass of cerebral substance in Lord Pomfret's cranium, has been ascertained to exceed very much that of Newton and other great luminaries of science. And thus structure may be conceived as modelled by nature for the purpose of modifying life, which is her moving principle, and to bring the mental properties into play and a proper relationship with animal matter, without which her ends in the creation could not be gained, as the steam-engine would be useless without that motion which man, its inventor, imparts to it by the aid of science. Yet who ever supposed that the power of motion in the steam-engine was an inherent property of the materials of which it is composed, requiring merely that these should assume the form of an engine to bring that power into action? How much more independent, therefore, must not the mind itself be, the intelligent principle of man? We should rather, therefore, be disposed to refer the mind's origin to the Creator than to the created being. In another part of this work, however, an admission is made of the possibility of consciousness existing independently of the human structures combined with it upon earth, although we grant that there are no physical proofs of this consummation of the promises of revelation of any positive kind, while none certainly, on the other hand, appear to exist against them. Moreover, the presumption of the mind being distinct is much favored by the very essential difference observable between the phenomena of the mind and those of the organic structures. Nutriment and a due circulation of crimson blood are necessary to the exercise and application of the mind in the circle of bodily functions, to the intercommunication with the external world, and to the generation of ideas and consciousness, no doubt; but all the facts connected with this point are liable to failure when urged in support of the notion of a common origin and simultaneous destruction of mind and body. Their union ceases, it is true, and matter is generally dispersed indeed, but not

in itself destroyed, being merely changed as to its forms and associations. Why may not *mind*, therefore, abstractedly considered, be supposed to undergo a similar dispersion and recombination? The idea seems to be far from being inconsistent with sound philosophy. The rock, indeed, upon which the materialists have generally split is, their having taken it for granted, that, because the functions of animal structures perish with their corresponding tissues, the phenomena of consciousness must become equally involved in one common destruction. Thus, for example, because, when the structure of the liver is broken up, the secretion of the bile ceases, they reason analogically that mental consciousness becomes equally destroyed with the destruction of the brain, without taking into account the great dissimilarity between the two functions.

In support of his opinion that ideas are identified with sensations, the author quotes Locke, who says something of the same kind, but qualifies the notion by terming ideas "*the internal sense*," and thus inferring a similarity of qualities but not an identity of consciousness in one common seat and origin. There appears to be this essential difference physiologically, that the one is the cause, and the other the effect. The author, however, does not refer all the ideas to the senses; some of them he considers as *instinctive*, and these last to be derived from a parental source. No admission is here made, therefore, of any immaterial origin, although the possibility of a distinct existence and future recombination is subsequently admitted. The meaning of Locke in thinking that ideas and sensations are the same, seems to be perfectly obvious; and we agree with our author, who says, "we have no experience of any phenomena of the mind which is not a sensation," because ideas and sensations stand in the relation of cause and effect; some sensation or consciousness must precede that immediate change which originates ideas. We do not think the author, therefore, warranted altogether in inferring that ideas and sensations are exactly the same, and that as sensation is a property of matter derived from a parent, therefore the origin of the mind is from the same material source. It must be recollected, in considering Locke's notion, that

it was the resemblance between ideas and sensations which induced him to class them together, still however distinguishing them by the term "internal sense," and, moreover, Locke wrote rather as a metaphysician than a physiologist, using his terms relatively, and by no means appearing to infer an absolute identity of origin and unity of function.

In tracing the relation of the mind with organic life, our author attempts to shew that the phenomena of one are not less various than those of the other, while he "doubts the possibility of saying where variety only of the principle ends, and where the agency of a different one begins." We fully admit this difficulty, but we see in it no indication therefore of the relations of the mind with the body arising necessarily from one common origin, although their union be derived from a parental source in the growing ovum. The variety of the one seems to be naturally attributable to that of the other, from the modifying influence of each upon its associated fellow properties. Thus the author expresses himself:—

"Will it be said that unity or integrity of the organic life is to be inferred from the similitude of its phenomena in men, to those of other organized beings which display only this form of life? The distinction will also fail upon this ground; for there is scarcely a greater difference between the intellect of a worm and of a man than between the number and character of their organic peculiarities."—p. 31.

Having disposed of the origin of the mind, and its relation to organic life, the author proceeds to consider the relation of the mind with the structures; and this gives him an opportunity of making a series of well-directed remarks against craniology, for which, however, he deems it necessary to apologize, as the manuscript of this part of the work had been written several years. Craniology is not, however, yet overthrown, although the present phrenologists have somewhat modified the original doctrines of Gall and Spurzheim; and we have no sort of objection to see an author of Dr. Pring's good sense and abilities revive the artillery he has so long kept pointed at the supposed impregnable fortress of the craniologists; for notwithstanding they have been dislodged from every position they have

taken up, the fugitives are apt to collect again their scattered forces, and to fire a few shots whenever an opportunity is afforded, such as the hanging of some remarkable criminal, the death of some celebrated person, or a case of monomania, when they may chance to procure a cast of the head, and discover such protruberances as answer their eager expectations. Dr. Pring's chief objection to the publication of this part of his work rests with the anticipation of much of his argument in the 88th number of the Edinburgh Review, which, for its exquisite wit and forcible argument, stands quite unrivalled by any thing of the kind—emanating too from the very city—the modern Athens itself, where the great apostle of the creed preached his doctrines with all the chivalry and success of "a first ardor," as our author would say. But we quite agree with the author in deeming it to be wholly unnecessary for him to retrace his steps over the ground, and attempt to improve his observations upon craniology, as he has said quite as much as it deserves, and enough to expose the palpable absurdity of the doctrines. "The secret," says the author, "of the manufacture of this craniologico-phrenologico-physiognomical system is this; that, comparing the mind to a musical instrument, *others* have been content to reckon and arrange its notes, while our philosophers have wisely and profoundly reflected that every note ought to have a separate string."—Note, p. 74. The author having critically analysed all the points of the system, of which Gall and Spurzheim are the founders, proceeds to review the indications regarding the relative connexions between the structure of the brain and its function, which he conceives to be simply this, that the properties of the latter are allied with the materials of the former, by which union the spheres of the properties of functions are preserved; and "that these properties are related, and reciprocally act upon, or modify each other; that function is a result of this relation; that this relation between properties of respective species is one dependent upon place; and hence variations in the place of component molecules produce one of or all the effects which have been ascribed to such variations, by modifying or destroying the relation which naturally subsisted between the properties of respective

spheres, which relation was essential to the existence of the function."—p. 125. Thus changes of function, arising from changes of the structure, are effected by means of an interruption of the continuity of related allied properties by breach or interposition. The first portion of the above quoted passage very clearly illustrates the union of mind with matter.

The author thus sums up the amount of our physical testimony on the relations subsisting between the mind and structures: "the imperfection of which," he observes, "is so obvious as, in candour, to compel the acknowledgment, that on this subject our faculties are not competent to any satisfactory conclusions. How far that revelation which takes up vaguely the history of man after death may be rationally confided in, it is no part of our present business to examine. It is asserted by this revelation that the union which subsisted between properties, and classes of properties, during life, is resumed after death; that for a time something like an elementary condition of these properties succeeds to death; that at a future period they are recombined: from an informal they are restored to a formal condition; and the functions of their combined state of course resumed with modifications not clearly designated."

The author concludes this interesting chapter by observing that *physical testimony* offers no suggestion absolutely incompatible with these doctrines, the authority of revelation merely assuming more than is to be satisfactorily deduced from physical analysis. This opinion we are glad to assist in recording, because the *over-righteous* are apt to condemn physiology as a department of science leading the mind astray from revelation. We have never in the course of our physiological studies and observations discovered any contradiction to the doctrine of revelation in its relation to the immaterial spirit, although we have sought in vain for some positive confirmation of the nice notion of a future state, which we are obliged to adopt upon the authority alone of revealed religion, the testimony of which rests upon other ground than that of physiology, while assuredly nothing in this science contradicts it.

In his general account of the constitution, phenomena, and maintenance of

the mind, the author presents two alternatives for discussion and adoption, the one being that the phenomena of the brain consist wholly of former sensations conveyed to it from the senses; and the other that it possesses a sensibility, by which sensations *may be originated in itself*, in accordance with a question previously proposed as to the seat of *inherent sensibility*. The contents of this chapter are thus summed up:—"Thus we have traced faintly a general history of intellectual being; we have considered its origin by derivation from parents; we have hinted at the laws of its development during fœtal growth: we have perceived the basis of it to be a sensibility which, by its relations, chiefly with externals, supplies the materials of the instructed mind; we have considered its relations with its alliances—with the organic life of which it appears to be a modification in a particular seat, and with the structures, with which it holds complex relations, originating the effects of a reciprocal influence, both direct and indirect. We have considered the general laws of sensations, of their production; their localities, of their retention, their preservation, and of their association. We have seen that the maintenance of this intellectual possession, which gives man so distinguished, though perhaps so unenviable a supremacy in the creation, is ensured by the concurrence of all those means which tend to the general support of life."—"Our analysis has been confined principally to this present state of existence: and here our history ends. It is however deducible from this analysis, that the history of intellectual being *does not terminate* in this stage of existence: thus much is demonstrable. But to this stage of existence our experience is confined: and if we reason of a future state upon physical testimonies, it must be upon analogies and presumptions, which will be productive of but little satisfaction. It may be said that physical analysis is capable of demonstrating a future existence of some sort; but it does not instruct us *of the form of this existence*, or of the *relations* in which it is liable to be engaged." p. 227. Our readers will now perceive that the author, as is said of the dæmon of darkness, is not so black as he is represented. It is however requisite to go very carefully over

Dr. Pring's ground to find out that he has not imbibed, or does not profess the errors and prejudices so pertinaciously adhering to the minds of some materialists. In fact, in spite of all our science, we know little enough of our present state, and nothing of the future but what is promised; all else is mere conjecture. Physical testimony is only cognizable to our senses in a direct and immediate manner, consequently is limited to what is, and extends not to what either was or is to be beyond our terrestrial sphere. It is undoubtedly great and good to be well instructed in physics, and highly satisfactory to find it not contradictory of revelation; more must not be looked for; if it is, false conclusions will result, although perhaps to a candid and unprejudiced observer, some inferences made be occasionally made of a favorable tendency.

The second part of the work relates to subjects but little under the cognizance of the physiologist: it is entirely devoted to abstract moral doctrines, deduced from physiological facts, and applied to the social purposes of man. It is announced as a system of ethics founded on the perception of a moral beauty, such as was recommended by Shaftesbury. Upon the influence of moral beauty the author thus concludes:—"From this analysis it appears that, in order to a change of affection with respect to a given object, either a new and more powerful affection must be produced in its favor, *with which the prevalence, if not the existence of the former one is incompatible*; or the agreeableness of this object *with an existing affection* must be demonstrated—as if a thing were liked or disliked from an error of opinion with respect to its nature or quality, which being corrected, it is differently regarded, without a change of affection; or else the object itself must be appropriately modified by association, relatively to affections which suffer no change." We must leave our readers to digest this short and pithy summary of a very abstruse and metaphysical subject, and refer him to the chapter itself for the grounds of this result of the author's analysis of the influence of moral beauty.

Before, however, we take leave of this chapter, we cannot avoid some notice of a remark, peculiarly the author's

from its sophistry, where he combats with the general notion of the beauty of the structures of the human body being chiefly displayed in the myriads of vessels, nerves, and fibres which compose it, upon the ground that the admired complexity "*is the source of all the diseases with which our unlucky carcasses are liable to be visited.*" The author, *therefore*, thinks that "it would be a much more beautiful piece of mechanism, if all its function were performed *by a single screw.*" We have generally regarded *the simplicity* of the results, and *the order* which regulates the complexity, as constituting the beauty of our inner frame, but which beauty would be either lost altogether, or diminished, were a *single screw* to perform *all* the functions of our mechanism. And, we consider, that "*our unlucky carcasses*" (let us intercede for a better epithet) would have been still more unlucky had they depended upon a single screw, or one moving cause, instead of many united as they are together in perfect harmony of operation, and producing the general result of health. The author, however, acknowledges that complexity and simplicity may be respectively admired; but as complexity of organization entails, he thinks, complexity of disease, he prefers, and imagines he could mend nature's work by making it more simple—by reducing it to *a single screw*, apparently forgetting, however, that while he may numerically reduce the list of human disorders to one, that one would consequently be fatal. Nature, more wise and provident than the Doctor, has, however, so ordained it *for our lucky carcasses* (as we deem them) that the important and *envious* ends of our creation are best secured by a circle of complicated organs and functions, to which, if the evil passions and desires of mankind did not interfere, a healthy and vigorous action would ever belong; and when this does become interrupted, as in our condition it frequently must, the function of one acts as a compensation for another organ; and life is thus preserved in the whole machine until the purposes of creation are fulfilled, and the inevitable law of nature takes its final course in the gradual breaking up of the structures of our bodies, disuniting the mental from the corporeal qualities, and destroying life and organization together.

Upon the nature and obligation of a sense of honor, Dr. Pring thus delivers his opinions at the conclusion of this short chapter:—"The existence, then, of a sense of honor, in its better forms, seems to depend upon a disposition in the individual to a preference of its rules, whether from pride, or philanthropy, or these mixed, sufficiently powerful to oppose all other temptations. Its influence on character, ~~when the principle is not thus adopted, depends~~ either upon the desire of applause, or the fear of disgrace. Among those who are susceptible of its recommendations, a corresponding obligation, both in degree and in kind, may be calculated upon; but with those who have no disposition to accept it either from pride, philanthropy, or taste; and who are so far alienated from all regard to society, as neither to fear its censure, nor desire its applause; with all such the recommendations on behalf of a principle of honor, furnish no obligation."—p. 340.

Upon the influence of political expediency the author thinks—"That if a concurrence in the scheme of social welfare is founded on the dispensation of reward and punishment, or upon any ground of affection or taste, such recommendation will influence those only who are disposed to admit the reality and importance of such dispensation; or whose tempers incline them to embrace the taste or affection proposed to them, rather than any other which might be opposed to it. Say, then, that a person, whether from the expectation of reward, or fear of punishment, from a love of mankind, from a sense of honor, or a taste for moral beauty, concurs, on all occasions, in the scheme of general expediency, he does this because his individual interest is to obtain a reward, or avoid a punishment; or else, because he *indulges an inclination incompatible* with general good, in preference to any other he may happen to entertain—and to this extent the spring of his conduct is the same as that of one who, before the nature of general expediency was understood, pursued exclusively his private advantage; that is, each would act under the impulse of a *prevalent affection*, entertaining only different objects, agreeably with the diversity of the dispositions with which they are related."—p. 345. After discussing the comparison of moral prin-

ciples and obligations, the author thus terminates this chapter:—"In digesting a code of ethics, these appear to be the principal objects: 1st, to define clearly as many rules of conduct which, without being numerous, may apply to almost any occasion of life, as are thought to be most conducive to public welfare; and, in order to avert the plea of *public or individual expediency*, for a departure from such rules, the exception to their observance, which can be advantageously permitted, should be enumerated among the rules: 2nd, to impose such obligations to these rules, as may insure this end by relation with affections which are common to all mankind. Such a system, which is perfectly within the scope of legislation, admitting a rational demonstration of its *usefulness or necessity*, would be readily accepted *by the understandings of men*; and it would furnish a model on which their affections may be trained by methods and on principles which will presently be considered—not indeed with the presumptuous hope of *deciding* upon such intricate questions, but with the more humble design of offering merely a few indications which may engage in this cause the reflections of those who possess more suitable qualifications."—p. 383.

We have only room for one more extract, and this shall be devoted to the concluding paragraph of the last chapter, on the principles and institutes of moral government. Upon this subject the author thus delivers himself:—"What the effects of an additional progress in civilization may be *upon the happiness* of mankind, we seem to be in a very fair way of knowing. Regarding education rather physiologically than politically, it appears to me to have much the same sort of relation with the intellectual, as cold, miasmata, poisons, medicines, &c. have with the organic principle; that is, disease, or a preternatural state, of which, in the intellectual department, every idea is an additional property, is their common result. If, however, the whole course of civilization, or the departure from the state of animal life, is to be regarded as a disease, a sophistication, or perhaps an evil, the apology neither has been, nor will be wanting, that it is a necessary one. At a period, how distant I will not venture to predict, prevalent intellect will have attained a

higher level than the present, and the result will be, either suddenly or progressively, such a change in political institutions, that they will exhibit but a very partial resemblance to those with which we are acquainted. The career of civilization will afterwards proceed for a time, with all the energies of human intelligence; and then, unless an increase of happiness should follow by the discovery of new modes and principles from the increase of intelligence, either as a refinement upon the highest pitch of civilization, or from disgust or dissatisfaction at its results, men will court barbarism, or a return to the animal state, with more enthusiasm than they ever departed from it. Yet in this last resource will they be disappointed: the state of population will always impose the necessity for some kind of civilization, the form of which will serve probably but to illustrate some new specimen of corruption."—p. 441.

Thus the author, like the weird sisters, but on surer grounds, perhaps, informs us how "to look into the seeds of time, and say which grain will grow, and which will not," and to such a consummation does he think the march of intellect is fast leading us, when, every thing having been pushed to its utmost bearing, a retrogression may be anticipated. We must not, however, be in a hurry; we have yet to travel on land as well as water by steam, to rush through the air in balloons, settle the geology (if we may so call it) of the moon, and hold telegraphic communication with the *Lunatics*, (though, perhaps, the profession will be rather shy of "*a lunatico inquirendo*," for some time) together with many other little interesting matters on the *tapis*, before we get sick of our knowledge. And in the meantime lights are kindling in the new world that bid fair to outshine those of the old, which may accelerate the anticipated barbarism of our prophetic moralist, and outlive the crazy institutions of the continent. Geologists inform us that there are causes always in operation sufficient to account for all the physical changes of our earth. As it is in the physical, so it may be in the moral world; and history tells us, in the language of our prayer, that "nations and empires have their rise and fall, flourish and decay." If we look home for an example,

where shall we find a stronger one than in the profession of medicine throughout all its parts, the art itself, its means, its sciences, its agents? are these not all changed, and almost imperceptibly, from the state they were in at any former periods? and will not they still change, for are they not now changing? They are composed of elements the most versatile, and depend upon principles as mutable as the winds. As the public body becomes more enlightened, and knowledge is diffused, the little "*imperium in imperio*" of medicine will gradually yield to the all-powerful equalising system of intelligence, and, perhaps, it will be found, as it has been found in like cases, that the world can do just as well without them, as it did under their domineering influence. The author is, however, perfectly just in considering that the necessity for some kind of civilization must always exist, although this may probably but serve "to illustrate some new specimen of corruption."

We have thus taken a general outline of the nature of this work, which contains much matter of a deeply philosophical character, abstruse and lengthy, but full of interest. The author evidently aims at a reputation similar to that of Locke, though in a more limited sphere, and he has placed his points in a very argumentative, novel, and connected light. The subjects treated in the second part of the work follow very appropriately those of the first; and we are always glad to see such discussions entertained in connexion with physiological research; for they are then likely to be far better handled than by the mere theoretical moralist or metaphysician.

Lectures on Practical and Medical Surgery, &c. &c. Illustrated by Engravings. BY THOMAS ALCOCK; Member of the Royal College of Surgeons in London, &c. &c.

MR. ALCOCK'S book is announced as part of an extended course of lectures on the principles and practice of surgery; and, from the present specimen, we should be induced to wish for the publication of the whole. His observations, if we except an excellent essay on the inflammation of the mucous membranes, are principally directed to

the operations which are daily performed upon the blood-vessels; the accidents to which these are liable; and the means of avoiding, or of remedying them; together with many very interesting and practical directions relative to what are commonly considered as points of minor importance, from their familiar and frequent occurrence, but which the writer shows to be on this very account worthy of undiminished attention, from the judicious practitioner as well as from the diligent student.

"One of the most frequent errors which I have witnessed is that of neglecting what are termed common cases, or those of frequent occurrence; whilst others little likely to fall to the lot of the young practitioner, are sought after with avidity. I am fully convinced that the welfare of the patient and the reputation of the surgeon, more frequently depend on the manner in which the ordinary duties of the surgeon are fulfilled than upon extraordinary operations. I should therefore strongly advise, that the observation of the student be directed to the common accidents and diseases which fall to the province of surgery; that the manipulations required in the dressing of wounds and ulcers, be studied and practised until accuracy, dispatch, and precision be attained; that the minor operations be similarly studied, and, subsequently, the manner of adjusting fractures, &c.; in short, that all the mechanical adaptations should be so ready that no awkwardness should appear, nor difficulty be experienced. The various operations of more rare occurrence may be successively studied and practised upon the dead subject, until all the steps of each operation can be perfectly performed."

"Necessary, however, as the neat and ready performance of the manipulations of surgery may be, the judgment required to determine when they are called for, is of higher value and of more difficult attainment. Medical surgery is unfortunately too little cultivated, and less valued than its importance demands. The surgeon who does not understand the constitutional treatment of diseases, must be often humiliated by failure. Many a limb has been amputated, which, by the aid of judicious constitutional treatment combined with local remedies, might have been saved.

"It has been already observed that

the surgeon requires, and should attain all the medical knowledge proper for the physician, and a much more accurate knowledge of the structure of the body, as well as mechanical dexterity in the performance of surgical operations."

"It still remains for me to explain my motives in the arrangement of the present course of lectures:—in the importance which I attach to the unostentatious and ordinary duties of the surgeon:—on the absolute necessity of accuracy and completeness in every particular: lest the life of a human being should be sacrificed by the want of it! I know that many in the profession hold cheap any such ideas of precision, and treat the attempt to teach them with ridicule! I am deeply aware of the wide difference between the solid acquirements which shall enable a man faithfully to fulfil the arduous duties of our profession, and the arts, sometimes perhaps the most unworthy, which may delude the ignorant and lead to lucrative employment; the difference between the worthy exercise of a scientific and honorable profession, and the unworthy arts by which that honorable profession is occasionally perverted and degraded: the *savoir* and the *savoir faire* are indeed very different attainments, as different as science and cunning. To those who have not considered the subject, it might seem surprising with how small a share of intellect and science the *mere trade* of physic or surgery can be lucratively carried on. It is not, however, my intention to enter upon so humiliating a discussion: *verbum sat*."

We cannot find room for the detailed observations upon the circumstances to be observed in the investigation of disease; but we can recommend the consideration of the author's remarks in no way better than in his own words:—

"A skilful physician or surgeon carries the confidence of the patient along with him by the facility with which he traces cause and effect; and the direct reference which his questions bear to the malady, assures the patient that his case is understood. Not unfrequently the forcible though uncouth description in the patient's own words, conveys a more vivid impression than more refined language. The patient having stated all that he wishes to relate, deficiencies may be supplied by directing his attention to the points of omission.

"Some are apt to suppose that the

full investigation of any given case is a waste of time. I believe that the practitioner who is anxious to discharge his duty faithfully, will find the fullest investigation the greatest economy of time; for when the disease is once clearly ascertained and understood, the subsequent inquiries may be confined to the progress from one examination to another; whilst, with imperfect conceptions and confused notions, there is an endless repetition of the same unmeaning inquiries."

An extract from the writer's directions upon the subject of venesection we shall give as an example of his great care in making this matter intelligible; this particular operation, and the dangers attending upon it, as also arteriotomy, have been illustrated by several well-executed engravings.

"*Venesection*.—Before any one should be permitted to perform on the living body, he ought to be made acquainted with the strict anatomical relation of the parts on which he is about to operate; the bend of the arm is the place usually preferred. It is not sufficient that he be able to find a vein, for that is generally obvious enough, but he should be able to trace the course of the superficial nerves which accompany the veins, and also of the artery, that he may be enabled to avoid the injury of that vessel. The fascia, the tendinous expansion, &c. should be sufficiently known, that their situation may be distinctly traced. The principal points to which the attention of the student should be directed will be found in the illustrations of the surgical anatomy of the bend of the arm, which accompany these lectures.

"There is often considerable irregularity in the superficial veins at the bend of the arm; but the deviation of greater importance is that of the high division of the humeral artery, when one of its branches, generally the radial, but sometimes the ulnar, becomes more superficial than in the usual course of that vessel. Notwithstanding this more superficial course, it still passes under the vein and fascia, so that nothing short of gross ignorance, awkwardness, or inattention, can endanger the opening of the artery in performing venesection. Study accurately the relation of these parts to each other, and you may certainly avoid the disgrace of so dangerous a mistake. The practical illustrations of the surgical anatomy of the

parts concerned in blood-letting, being chiefly demonstrative, (viz. by actual dissections, aided by a series of models, drawings, and engravings, showing the usual relation of the parts and the more common deviations, and by tracing the situation of the blood-vessels and nerves upon the living arm, explaining the circumstances which should determine the point to be selected for the performance of the operation) cannot be fully conveyed by engravings alone, however accurate. The plates and explanations which accompany these lectures will, however, it is hoped, enable the student to proceed with advantage, and to profit by the dissections which he may have the opportunity of making, which should not be neglected. Drawings or engravings may recal impressions derived from actual dissection as vividly as they were at first imprinted; but no zealous student will content himself with graphic illustrations, to the exclusion of actual dissection.

"The *difficulties* occasionally experienced in performing venesection arise from various causes:—a cold state of the skin, by forcing the blood towards the internal parts, will often cause the superficial veins to be so empty as to be opened with difficulty, and when opened the quantity of blood is frequently insufficient and unsatisfactory; in such cases it is better to restore the warmth of surface before proceeding to the operation. Fear may produce effects similar to those of cold;—faintness, unsteadiness, the bluntness of a lancet, the condensation of the parts from previous festering, may each occasionally produce difficulty;—the smallness of the veins in females, who are tolerably plump, and in young children, frequently prevents them from being seen, so that their situation can only be ascertained by the touch.

"The *requisites* for venesection are—a correct anatomical knowledge of the relation of the parts, a lancet in good order, bandages, compresses, cups or vessels to receive the blood, water, towels, sponge, and, in case of faintness, hartshorn or ammonia, and these should be arranged within reach previously to making the puncture. In cases of emergency, a lancet, and any common material to serve as a bandage, will suffice. The placing the patient so that the light may fall upon the part, should not be forgotten, for it is an in-

dication of great awkwardness in the operator to place himself between the patient and the light, so as to intercept it and overshadow the part on which he is about to operate. The assistant should take care to prevent the blood from flowing upon the dress or bed of the patient, which may be effected by a little adroitness.

"Before proceeding to tie up the arm, examine whether the pulsation of the artery is felt in the usual course of that vessel, or whether there be any deviation from that course. The high division of the humeral artery when present may generally be traced upon the living body; so that accident from ignorance of such an unusual or irregular distribution of blood-vessels may be with certainty avoided.

"Although the vein which covers the artery may be opened without danger by an operator who is well acquainted with the relative situation of the vessels, and whose steadiness and dexterity can be depended upon; yet, as a general rule, it is safer to avoid opening the vein immediately over the artery."

"In persons who are very corpulent there is often difficulty in ascertaining the precise situation of the veins at the bend of the arm; but though the veins cannot be seen, they may be distinguished by the touch, so as to enable a careful operator to proceed with certainty and with safety to the patient. The interval between tying up the arm and opening the vein should not be too long."

It is not, however, because Mr. Alcock teaches more than is known and practised already that we think highly of his work; there is indeed in it no such pretence; but because he makes his subject interesting to the reader, and because he tells the student not only what, but how to think.

HYDRO-SARCOCELE.

To the Editor of the London Medical Gazette.

Staplehurst, near Maidstone,
Kent, Feb. 1, 1830.

SIR,

If you think the accompanying case of hydro-sarcocele of sufficient interest,

you will perhaps give it a place in an early number of your valuable publication.

I am, yours, &c.

H. W. JOY, M.R.C.S.

R. R. aged 58 years, a carpenter by trade, of good constitution, and of regular habits, in the year 1820 received a blow on the right testicle, which caused much pain at the time. The testicle gradually increased in size, and was occasionally painful till March in 1823, at which time he applied to a surgeon, who, finding fluid, introduced a trochar, and evacuated between two or three pints. The testicle was found enlarged. The operation afforded so much relief that the patient neglected further surgical advice, suffering little inconvenience till February in 1828, when the tumor had acquired a very large size. Five pints were evacuated by the trochar, and the testicle was found considerably increased in size. The operation of castration was proposed to the patient, to which he decidedly objected. The evacuation of the fluid was repeated three times during the course of that year, the testicle rapidly increasing. During the year 1829 the trochar was used eight times, the quantity of the fluid varying from five to seven pints each time. The patient's sufferings being now very much increased, he at length consented to have the disease removed. I therefore operated on the 11th Dec. assisted by my friends Mr. Watson, of Staplehurst, and Mr. Young, of Hawkhurst, surgeons. There being a small hydrocele on the left side, I punctured that also; and although the larger tumor had been emptied only five days before, three pints had already collected. I then continued the operation in the usual way. Much difficulty was experienced in removing the testicle from the sac, owing to adhesions, which were of a cartilaginous firmness. The cord was found healthy, and not at all enlarged; considerable hemorrhage took place from the veins, which were varicose. The spermatic, three small arteries, and a vein, were secured by ligatures. The edges of the wound were brought together by adhesive straps, assisted by two sutures. The removed testicle weighed three pounds three quarters avoirdupoise, and upon division presented the appearance described by Mr. Abernethy as medullary sarcoma.

The upper half of the wound healed by the first intention; and the ligatures having come away, the patient left his bed on the ninth day after the operation.

Jan. 1st.—Although the lower part of the wound is not quite healed, he is well enough to come down stairs and superintend his business.

Feb. 1st.—The wound is now entirely healed.

EVIDENCE OF INSANITY.

To the Editor of the London Medical Gazette.

SIR,

HAVING been a very attentive reader of your publication, and an admirer of your unceasing attention to the honor and dignity of the medical profession, I wish now to be permitted to express my satisfaction at the able manner in which you have commented on the subject of a late investigation, under the title of "*Law v. Physic*," in your 109th No. p. 439. Never was a more striking proof given of the incompetency, not to say ignorance, of the true physical nature of the most "stigmatized and loathed" of human maladies, than the late exhibition displayed.

A court of justice, especially an English one, is always entitled to the best evidence that can be obtained: will any one impartial listener acquainted with the physical history of the causes of madness, say, after attending the late court of inquiry, that your highly-appropriate remark is not founded in truth; viz. "the lawyers require too much, and the doctors are satisfied with too little?" It has been well said by a late author on the physical causes of insanity (the only ones which can lead to the ascertainment of truth):—

"Peremptory decision upon cases of lunacy is often required of medical men in courts of justice. Advocates in both civil and criminal cases under investigation, are too much inclined to demand of the faculty a *positive* testimony where truth and nature speak with all that doubt which never fails to influence every honest mind with cautionary hesitation; and although evidence founded on a prudent basis is frequently found

giving offence to legal professors, yet human imperfections will occasionally intervene to deter every liberal, scientific, medical practitioner, from being dogmatically positive."—Hill's Essay on the Prevention and Cure of Insanity, p. 393.

If knowledge be progressively advancing in almost all the arts and sciences, is it not rational to expect it should be found, at least, not to retrograde in ours? yet what unprejudiced mind who reads the solemn testimony of almost a cloud of witnesses in Mr. Davies' case, will not be ready to exclaim, "Why all these great physicians and surgeons cannot, or will not, tell us any more about the physical state producing insanity than they did 20 years ago, when it began to be bruited about among them that insanity is as much a corporeal disease as fever; yet now in our day of wisdom they seem to have lost sight of this well-founded truth, and speculate in our courts on the *effects* of this disease as they are manifested in mental aberrations! Is this the path to shew a jury how to arrive at the truth? These honest men might well refuse to listen to the second cloud of witnesses, seeing they could obtain nothing satisfactory, clear, definitive, or correct, from those whom they had heard, and to such little purpose."

Witnesses often know more respecting a case than they tell, and they allege as a reason for not being more explicit, that the counsel did not ask them: such an excuse cannot be admitted as applicable to the doctors who were subpoenaed to prove Mr. Davies' insanity; they were free to tell all they knew. But what did they appear to know on one of the most momentous inquiries that could come before them? Did they shew they were scientifically masters of the subject? Did they prove they had physically examined the unfortunate object, and traced analytically the origin of his mental illusions? No; there is no want of candor in averring they reversed the telescope, and viewed the case through a false medium, while mere lookers on are firmly persuaded that the trouble, anxiety, to say nothing of the enormous expense, have been all thrown away, and the day is yet to come when Mr. Davies' insanity or sanity is to be so investigated as to establish the actual truth; that such an event may be attained many able authors on lunacy

have clearly shewn; nay, that mathematical demonstration is not more true than that every actually insane subject carries about his unfortunate person so many existing circumstances in proof of his situation, that they who examine as it becomes them to do, can never be led into error but by wilful neglect.

One word more, Mr. Editor, and I will exercise your patience no longer.

It is a great misfortune that in our judicial inquiries we hear so much of party and of victory, of the losing and the winning side; all this is irrefutably wrong: medical men particularly should be of no side, but on that of truth. What did one of our most useful and valuable surgeons once say in a court of justice, when pressed for his opinion in a case of murder? "Opinion," said he, "I came here not to give my opinion, but to state facts, which I have done;" and left the court.

OBLIVIONI TRADITUS.

Liverpool, January 15, 1830.

EXAMINATIONS AT APOTHECARIES' HALL.

To the Editor of the London Medical Gazette.

SIR,

As you did me the favor to insert my last communication in your respectable Journal regarding the examinations at the Apothecaries' Hall, probably you will extend your indulgence, and permit me to offer a few additional remarks. You state, that the Apothecaries' Company do not intend to examine in surgery, which I will presume to be the fact. But now let us see how matters stand. The pupil, who presents himself at the Apothecaries' Hall, goes fully prepared to be examined on Anatomy, knowing at the same time the possibility of his being rejected even although he should already have passed the fiery ordeal at the College of Surgeons,—several instances of which have occurred. The only questions, therefore, which he has to encounter at the one which he has not at the other, are a few on surgery, which, if he is a good anatomist, he will not be at a loss to answer. With respect to midwifery, it would appear

that our professional sultans, like those of the eastern world, think the lives of the women to be of little or no value. You state, however, in your editorial remarks, that the Apothecaries' Company have not the power to examine in midwifery. There is an old proverb which says, "Where there is a will there is a way," and I have no doubt but the Apothecaries' Company by and by will discover that they have as much power to examine in obstetrics as in anatomy and the other branches*, and if so, I would ask why students should be compelled to possess both diplomas, when one examination will include every branch of medical science with one exception only? Do not imagine that I wish to depreciate the character of either establishment, but if one diploma is sufficient, surely the finances of the student, in common honesty, ought to be considered.

I remain, Sir,
Your obedient servant,
AN OLD PRACTITIONER.

Feb. 6th.

MEDICAL GAZETTE.

Saturday, February 13, 1830.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

COLLEGE OF PHYSICIANS.

THE evening meetings held at the College of Physicians commenced on Monday last, under the most auspicious circumstances. Among those present were the Duke of Wellington, Lord Lyndhurst, Lord Tenterden, Lord Westmoreland, Lord Stanhope, several Bishops, Judges, and other distinguished persons. The presence of so many noblemen and members of the government gave great *éclat* to the conversa-

* We have doubt of their having the *will* to examine in midwifery, and if they find that they have the *power*, we anticipate that such examinations will take place.—E. G.

tion; and their honoring the College on this occasion is calculated to raise our profession in public estimation, by shewing how highly it is appreciated by men of the highest rank, and holding the most prominent stations in the country. When we reflect how industriously it has been attempted by some to lower us in the public eye, we feel doubly called upon to express our sense of the obligation under which we lie to Sir Henry Halford, to whose connexion with the aristocracy, and to whose zeal in promoting the honor and dignity of the profession over which he so ably presides, the College is indebted for the presence of these distinguished visitors.

The learned President having taken the chair, with the Lord Chancellor on his right and the First Lord of the Treasury on his left, congratulated the meeting on the advantages which they had gained from the establishment of statistical reports on the nature of disease as it presents itself in foreign countries, and he spoke in high terms of the facilities which had been afforded in effecting this purpose by various members of his Majesty's Government.

After these preliminary remarks, Sir Henry proceeded to lay before the meeting an interesting paper, which turned chiefly on the prophetic power attributed by so many of the philosophers and poets of antiquity to the last moments of life—a subject calculated to arrest attention—while additional interest was excited by the elegant language in which the essay was written, by the numerous classical illustrations in which it abounded, and by the emphatic and excellent manner in which it was read by the learned and accomplished author.

Sir Henry Halford on the Prophetic Power said to occur before Death in the Kavros, or Brain Fever.

Sir Henry began by observing that

he regarded the description given by Aretæus, of the *kavros*, or burning fever of Hippocrates—the brain fever of English authors—as one of the most interesting specimens of medical literature which had come down to us from antiquity; remarkable alike for the beauty of the language (Ionic Greek) and the fidelity of the details. It was not to the early stage similar in its phenomena to other inflammatory diseases, but to its termination, that the author was anxious to direct attention—a termination ushered in by syncope, followed by cold sweats, and “a loosening of all the bonds by which the human frame is held together.”

Aretæus represents the patient as the first to discover his approaching end, and announcing it to his attendants; as seeming to hold converse with those gone before him, and acquiring a prophetic power in the last moments of existence; while he attempts to account for this by supposing that the soul, whilst “shifting off this mortal coil,” becomes purer and more spiritual, as if its new existence had already commenced. This account of the description of Aretæus was followed by the history of a case which had fallen under the care of the learned President. A young gentleman who had been using mercury, caught cold while under its influence, and became affected with fever. On the seventh day, when Sir Henry was first called in, he was in a state of the highest excitement—threatening those around him, and not to be approached without increasing his irritation to fury. He was put under restraint, and tartarized antimony administered at intervals, in doses of a grain each time. On the eleventh day from the commencement of the attack, he had become quite calm, and to those about him he seemed to be much better. It was observed that he had repeatedly said he should die, and had talked with the utmost composure of his affairs, giving directions for their arrangement. He sent messages to his absent friends, and spoke of a sister recently dead, as one whom he was about immediately to follow. In answer to his interrogations, Sir Henry found that he had not slept anterior to this quietude, and that his pulse was quicker than ever. He then became satisfied that the improvement was but in appearance—that it was “a lightning before death,”—

and that the hours of his patient were numbered. He died that night.

The author next alluded to the case which he had related last year, in which a gentleman, laboring under insanity, was put to Shakspeare's test of "rewording" his meaning. In this case also, some restoration of the mind took place before death; but as the case was a chronic one, the phenomena were different—different as delirium from insanity. The mention of this distinction led the author to allude to the eloquent pleading of Lord Erskine, in defence of Hatfield, who was tried for shooting at the King. "In some cases (said he), perhaps in several, the human mind is stormed in its citadel, and laid prostrate under the stroke of frenzy. These unhappy sufferers, however, are not considered by physicians as maniacs, but to be in a state of delirium from fever. There, indeed, all the ideas are overwhelmed, for reason is not merely disturbed, but wholly driven from her seat. In others, reason is not driven from her seat, but distraction sits down upon it along with her—holds her trembling upon it, and frightens her from her propriety."

Returning to Aretæus and the prophetic power attributed by him to patients under this form of fever, the learned President observed that it did not appear to him necessary to attribute the phenomena to any supernatural influence. We were accustomed to see the mind frequently "clear up" in the last hours of life, especially when this is cut short by diseases which have previously disturbed the intellectual faculties. The mind becoming capable of exercising the most correct judgment when no longer biassed by the passions, and the experience of the past giving wisdom to the inferences as to the future; such being a period, according to the lines of Milton,

"When old experience does attain
To something of prophetic strain."

The author next entered into a curious and erudite discussion, in which he displayed great ingenuity and research. The object was to prove, by numerous illustrations, the general prevalence in ancient times of a belief that some prophetic power attended the last hours of existence. He began by referring to holy writ, quoting the passage from the Pentateuch, where it is said that "when Jacob had made an end of commanding his sons, he drew

up his feet into the bed, and yielded up the ghost." The former part of this passage Sir Henry thought might be more faithfully rendered, "when Jacob had finished imparting his solemn injunctions to his sons,"—injunctions with which were mixed up much prophetic matter. And although the learned President, believing the narrative of Moses to have been guided by the light of inspiration, and therefore not to be humiliated by being compared even with the sublime description of disease to which he alluded; still, he observed, it was remarkable that the Deity should think fit to choose the dying hour of the patriarch in which to enlighten his mind as to his gracious purposes for the future.

The fame of Jacob's prophecy, as well as of those of Isaiah, extended far beyond the limits of the country in which they were made; and the learned President deemed it probable that they had spread over the whole of the Roman Empire by the authority of the Sybilline leaves. The general belief which attributed the gift of prophecy to the hour of death is alluded to by many, both of the Greek and Roman authors; and among others, Cicero, no less distinguished as an orator than as a philosopher, in his first book *De Divinatione*, mentions, that the death of Alexander the Great had been predicted by an Indian about to die on the pile. In the sixteenth book of the *Iliad*, Patroclus foretells the death of Hector; while Hector, in his last moments, prophecies the fall of Achilles by the hand of Paris.

The same idea of prophetic power is seen in Virgil, who makes Orodes (10th book of *Æneid*) predict the death of Mezentius, by whom he had just been mortally wounded.

"Non me, quicunque es, inulto,
Victor, nec longum lætabere: te quoque fata
Prospectant paria, atque eadem mox arva tenebunt."

So also, Shakspeare, when Hotspur falls in the conflict with Harry Monmouth—

"Oh! I could prophecy,
But that the earthy and cold hand of death
Lies on my tongue."

In Richard the 2d, too, we find John of Gaunt, when dying, exclaim—

"Methinks I am a prophet new inspired."

The author concluded nearly in these words:—"I have extended this speculative part of my paper to too great a length;

not that I dread the reproach of those among you who delight to mix the elegancies of literature with the severer studies of your profession; nor do I fear the disapprobation of others who are intent only on acquiring a knowledge of physic: they will surely thank me for having laid before them so faithful, so beautiful an historian of disease as Aretæus."

REGULATIONS WITH REGARD TO PAPERS.

Resolutions of the Committee appointed to receive and consider the Papers presented to the College.

1. ALL papers proposed to be read at the evening meetings of the College, should be sent to the Registrar at the College of Physicians, who will acknowledge the receipt of them by a notice to their respective authors.
2. All papers thus received will be laid before the President and Committee, who will arrange the order in which they shall be read.
3. All papers will be read to the meeting by the Registrar, or his deputy, in the presence of the President or Pro-president.
4. Notice will be given to each author, of the evening on which his paper will be read.
5. At the end of each year, a selection of such papers as may be deemed useful for publication, whether read or not at the College, will be made, and, with the consent of the authors, printed in the Transactions.
6. Such papers as either from want of time may not be read at the College or not deemed desirable for publication, will be returned to the authors at their request.
7. The reading of papers will commence at a quarter past nine o'clock precisely, and will not be protracted beyond ten o'clock.
8. No paper which has been previously read before any other Society will be admissible.

WESTMINSTER MEDICAL SOCIETY.

January 30th, 1830.

Interesting cases of Jaundice.

THE subject designed for discussion being unavoidably postponed,

MR. GILBERT BURNETT related a case of jaundice which had been under his care, and which terminated fatally sooner than even the most severe forms of that disease usually do. He directed the attention of the Society to the various phenomena observable in different cases, and the modes of treatment which

under such circumstances ought to be pursued. The heads of the case were shortly as follow:—A young gentleman, aged 22, previously enjoying good health, though leading a very dissipated life, especially as regarded the gastric and sexual propensities, without any severe indisposition, found his complexion darken for several days, until on the fourth he was completely jaundiced. On that day he was first seen by Mr. B., who described his skin, eyes, &c. as of a dark drab rather than a yellow hue. A dose of calomel and colocynth, followed by infus. sennæ c. potassæ tart. restored him next morning nearly to his ordinary appearance; the evacuations, which had been clay-colored, became dark, and the urine, which had been of almost intense ochrey tint, became clear. The succeeding day, however, found him relapsed to his former state, and notwithstanding the use of strong purgatives, mercurials, and all the ordinary treatment, the skin became day by day more settled in its greenish brown colour, and the evacuations maintained their light and dark hues in an obstinately inverted order. One morning after, the attendants thought that he had slept more quietly than usual, they discovered him to be insensible, and Mr. B., when summoned, found him in a state of coma, with pupils fixed, and breathing stertorously; he was cupped without any relief, and in a few hours expired. An examination of the body was not permitted, but from the absence of uneasiness in the region of the liver, and the peculiar lividness or greenish tint which prevailed, Mr. B. felt inclined to consider this one of those cases of jaundice in which the bile is not eliminated from the blood, as contrasted with those more ordinary forms of icterus in which it is freely secreted, and subsequently reabsorbed; or at least that the non-elimination was the more serious part of the case, as it is always the most serious form of jaundice; and he put it to the consideration of the Society, whether death in these instances might not in some measure resemble apoplexy, in that the coma and oppression of the sensorium might be accounted for by supposing that the blood vitiated by the admixture of bile, or the non-separation of its elements, would be as unfit to excite the brain to the due performance

of its functions, as the circulation of venous blood there is in apoplexy; in which disease he was of opinion that the symptoms depended on the non-arterialized state of the blood rather than on any absolute pressure on the organ. He then took occasion to advert to the treatment of jaundice, in which a fashion seemed at different periods to prevail; at one time emetics, at another purgatives were almost exclusively employed, and now calomel appeared often regarded as a specific; while these and other remedies seemed to have been prescribed almost empirically in every such case, merely because nosology had named it jaundice; whereas if he understood the matter rightly, jaundice might be the effect of or occasioned by, a variety of causes, in some of which, although mercury might be a most valuable remedial agent, in others it would be at least inefficient, if not hurtful. When, as in the case related, there seemed to be only a partial elimination of bile, or when bile of a vitiated quality is formed, mercury would appear to be especially indicated, both as given by the stomach and rubbed into the hypochondrium. When inflammation of the liver is suspected, by which the separation of bile might be interfered with or suspended, then again mercury, with blood-letting, both general and local, would seem proper; when, also, organic changes in the liver rendered that organ less able to perform its duties, a powerful stimulus, such as mercury, might also prove beneficial; but when the liver does secrete bile, and that both abundantly and of a healthy kind, as often is the case, and evidenced by the evacuations, although the whole of the body might be suffused therewith; or when icterus proceeds from biliary calculi, or other obstruction to the passage of the hepatic secretion into the intestines, when in fact the liver is acting energetically, perhaps even too powerfully, to prescribe the same means as when it is indolent or utterly inactive, would seem to be highly unphilosophical, inefficient, and absurd. The prognosis in simple jaundice, he observed, was generally favorable, and even the most violent visceral disorganization, which immediately leads to a fatal result is not infrequently cured by communication with the atmosphere, or general, of a sort which has not been known for the first time kind; that although

be tedious, it is not dangerous. It has, however, been long remarked, the "green jaundice" is occasionally fatal. Dr. Baillie and others have recorded such cases; and the occurrence, though not frequent, should lead to a jealous scrutiny of the symptoms whenever this form of icterus occurs, and to a very guarded prognosis.

DR. BARRY observed that in his opinion the pathology of jaundice was but little understood; he spoke, of course, under correction, for his absence at Gibraltar had so completely cut him off from medical publications that he confessed his ignorance of modern doctrines. He was not disposed to attribute the yellowness of icterus to the re-absorption of bile, but thought it dependent on some other, perhaps uncommon cause, and instanced the yellowness often occurring in fevers; and that which marked the waning of a bruise, or what is commonly called a "black eye." Diseases of the liver he thought in general obscure; and even after death he scarcely knew what appearance would indicate decidedly inflammation of that viscus during life.

Several interesting cases were mentioned by different members.

DR. GORDON had met with an instance in which a young lady, after having long suffered from jaundice, and used all the remedies commonly employed against it, was cured by a moral impression, that of fright. She was overturned, and thrown from an open carriage into a ditch, from which period the jaundice began to diminish, and speedily disappeared.

DR. MACLEOD alluded to the circumstance of cases of jaundice occasionally coming suddenly to a fatal termination where there had been no particular reason to apprehend such a result. A young woman had some time ago been under his care for jaundice, which resisted various methods of treatment. The patient made no complaint, and appeared to suffer little inconvenience, when suddenly she became comatose; the coma gradually deepened, and she died in forty-eight hours. All the membranes of the brain were found of a deep yellow color.

DR. MACLEOD said that a few days ago he had been called in by a practitioner to a gentleman who had become affected with jaundice, and for the first time in his life. This passed

short time, but recurred during the night in question. At the time Dr. Macleod saw him he was in a state of coma, with partial convulsions; but the coma was not profound, as the pupil acted on the stimulus of light; and the patient, who was placed in a sitting posture, partly supported himself by voluntary efforts. Nevertheless, the coma gradually deepened, and he died in a few hours. The jaundice had nearly disappeared.

Mr. NORTH related a case in which the disease had been very suddenly brought on by mental emotion. He was attending a young person who had had a child unknown to her friends. Aware that the nurse was ignorant of this circumstance, he alluded to it in her presence. This produced such an effect on his patient as nearly to cause fainting; and when she had revived a little from this state, it was observed that her skin had become yellow. He appealed to Dr. Macleod, who had seen the case with him, and who corroborated his statement.

ROYAL INSTITUTION.

Natural History of the Oak—Acorn Bread.

LAST Friday evening Mr. Gilbert Burnett made some interesting observations on the natural history of the oak.

Mr. Burnett observed that much confusion had existed as to the botanical names and the number of species of our native oaks. Linnæus considered them all varieties of one species, which he named *Quercus robur*. Later botanists distinguished two, three, and even four or five species. He was inclined to think there were three, and only three indigenous oak; viz. the stalk-fruited, the sessile-fruited, and the downy; and that the others are mere varieties, or probably mule plants, formed by the mutual impregnation of the three above-named species. Smith calls the first *Q. robur*, Willdenow applies the specific name *robur* to the second, while Mr. B. argued that the characters ascribed by the ancients to their *robur* agreed the most closely with the third; as Festus Pompeius says, "*materiam quæ plurimes venas rufi coloris habet robur dictam*;" and Pliny observes,

"*robur marinâ aquâ corrumpitur*," which is the least of all applicable to the pedunculata, and can surely never truly be applied to our English naval oak; whereas both the color and the strength, when not exposed to the vicissitudes of wet and dry, heat and cold, well mark the pubescent or downy, and of which we may say with Pliny, "as for the oak *robur* it will corrupt and rot in the sea."

With regard to the acorn, formerly so much used as an article of food, Mr. Burnett stated that they were rendered much more palatable, as well as more nutritious, by allowing them to germinate, and then suddenly checking their growth by heat, as in malting. A similar plan was recommended to be followed with the horse chesnut, which might thus be rendered fit for swine. The mode in which this process acts, is by the formation of a considerable portion of sugar.

Some specimens of acorn bread and biscuits were placed upon the table, which were very greedily sought after by those present, and very speedily disappeared, though made without the acorns having been previously *malting*.

EXTRACTS FROM JOURNALS, *Foreign and Domestic.*

EXTIRPATION OF THE UTERUS PRACTISED A SECOND TIME, BY M. RECAMIER.

SINCE the first operation of extirpation of the uterus, performed by M. Recamier, it has been twice put in practice at La Charité, by M. Roux,—unfortunately both patients died. Nevertheless, Recamier, nothing daunted, has just performed this formidable operation a second time.

A lady, aged 35 or 36, was attended by M. Broussais for a chronic affection of the uterus, characterised by considerable swelling of the lips of the os tincæ. The posterior edge of this was already deeply ulcerated, and the mischief extending downwards towards the vagina, and upwards into the uterus. Under these circumstances, despairing of success by ordinary means, M. Broussais called in M. Recamier, who gave it as his opinion, that extirpation was the

only means left to be tried. Various consultations were held, at which MM. Marjolin and Desormeaux assisted, and these ended in a resolution to perform the operation, which was accordingly done by M. Recamier on the 13th of January, in the following manner:—

The patient was placed upon an elevated bed, in the posture adopted in lithotomy, M. Lisfranc on one side, M. Sanson on the other; MM. Amussat and Broussais holding apart the lips of the vulva, while M. Recamier, stationed in front of the patient, introduced the index finger of the left hand into the vagina, as far as the neck of the uterus, and then taking one of the pincers, he placed it transversely on the anterior lip of the os uteri, and gave it to an assistant to hold, while he introduced another in a similar manner in the antero-posterior diameter of the same part. He then took both pincers himself, approximated them, and gently drew the neck of the uterus towards the external opening. At this moment one of the pincers slipped. It was reapplied higher up and more firmly than before. M. Recamier then gave both instruments to an assistant to hold, desiring him to keep them directed downwards, that they might not interfere with his manipulations. The next step consisted in pushing up the fundus of the bladder and corresponding part of the vagina, while with a small bistoury, having a convex blade, he gently divided the texture of the vagina at the bottom of the sinus formed by the union of this canal with the anterior lip of the os tincæ: he enlarged his incision laterally, to the extent of about an inch and a half. The operator now laid aside the cutting instrument, and with the nail and forefinger of the left hand, he separated the dense cellular tissue which unites the lower part of the bladder with the anterior part of the neck of the uterus, and in the same manner tore away the peritoneum, which forms the bottom of the *vesico-uterine* depression; the finger immediately passed into the peritoneal cavity, and was carried, first to the left of the uterus along the upper edge of the broad ligament, and then to the right, in the same manner. At these two times M. Recamier, by means of a bistoury (concave on the cutting edge, and guarded by a sheath,) divided a small part of the upper border of each broad ligament, to the ex-

tent of about six lines. Then a needle, armed with a double-waxed thread, was successively carried up to the same ligaments, and passed through their bases from behind forwards; one of the ends of the thread was carried forwards, the needle being afterwards removed by a movement the reverse of that employed for its introduction.

In this way each broad ligament was included in the noose of the thread, except at the upper edge, which had been cut, that the peritoneum might not be pinched in the ligature. A knot was run upon the thread, and firmly tied, so as to exert pressure on the uterine arteries, sufficient to interrupt the circulation through them. These precautions having been adopted, the uterus was instantly seized with the fingers at its base, and held from behind forwards, the broad ligaments cut within the ligatures, the uterus separated from the vagina and rectum, and the operation completed.

During the incision of the broad ligament on the right side, the cutting instrument was carried too close to the ligature, so as to divide it, and cause the knot to slip. M. Recamier immediately said that he would make pressure, which accordingly he did with success. In the former operation, the epiploon alone presented itself at the wound, but on the present occasion, in addition to this, several folds of the small intestine were seen. These were retained by M. Amussat, whilst the operation was being completed. The section of the broad ligament was made a little beyond the ovary and fallopian tube, so that these parts were removed with the uterus; a circumstance which did not occur in the former case.

The patient had hæmorrhage in the course of the day, which was arrested by plugging; notwithstanding this, however, blood flowed from time to time till next day, when she died in consequence.

Nothing can be more injudicious than an ill-timed compliment. The narrator of this case, immediately after informing us that the cutting instrument was carried too close to the ligature, so as to divide it, and that the patient bled to death in consequence, adds, “Il est superflu de mentionner la *sûreté*, l'adresse, et le rare mérite, que M. Recamier deploya dans l'exécution de cette operation.” We are far from

calling the surgical skill of M. Recamier in question, but a better opportunity might have been taken of dwelling upon it. We subjoin from another journal a notice concerning the woman on whom he performed extirpation of the uterus some time ago. The above is taken from the *Journal Hebdomadaire*.

SEQUEL OF M. RECAMIER'S FIRST CASE
OF EXTIRPATION OF THE UTERUS.

We recorded, Vol. iv. p. 346, the case of a woman on whom M. Recamier performed the operation of extirpation of the entire uterus. She has recently made her appearance at the Hotel Dieu for some accidental complaint, and an opportunity was then afforded of ascertaining and recording her actual condition. Her health continued good after she left the hospital, and she gradually resumed her domestic occupations, but was unable to work at her former trade of embroiderer, the degree of application required for which she found inconvenient. She has recovered her *embonpoint*, and her appetite is restored. She is habitually constipated, as she was anterior to the operation. This condition she has generally obviated by enemata, and it is to the neglect of this precaution that she has been obliged to come to the hospital again.

Since the operation her calls to make water have become much more frequent than before, so that she can scarcely remain above an hour without emptying the bladder; occasionally at night, she has not time to get up before it escapes. Even during the day the urine sometimes flows involuntarily. This circumstance has given rise to her readily taking cold, and she has had pain in the left knee, and some weakness of the entire limb.

Having neglected the lavemens for some days, tenesmus and pain in the lower part of the pelvis came on, with some swelling of the genitals. Alarmed by these circumstances, she applied for relief at the Hotel Dieu.

Examination per vaginam proved that the parts which had been operated on remained entirely unchanged, the swelling above alluded to being obviously produced by the irritation of the urine. The vagina was two inches and a half in depth, the upper part being hermetically sealed by the

adhesion of the sides. The membrane was moistened by mucus in small quantity, which, however, was not altered in any of its physical qualities.

After a few days she was able to leave the hospital again, being recovered from the slight indisposition which had induced her re-appearance there.—*Lancette*.

A HUNDRED AND SIXTY GRAINS OF
CAMPHOR TAKEN AT ONE DOSE.

A man, aged 74, residing at Breslau, having taken by mistake four ounces of camphorated spirits, which had been ordered as a liniment, soon became affected with the following symptoms:—burning heat of skin, frequent full and hard pulse, brilliancy of the eyes, redness of the face, heaviness of the head, anxiety, agitation, violent sense of heat in the stomach—then intense headache, giddiness, indistinctness of sight, and ocular hallucinations. The patient only complained of the heat, which he said was intolerable. The camphorated spirits of the Prussian Pharmacopœa contains 40 grains to the ounce, so that he had taken 160 grains at once. Some spoonful of almond emulsion were given him at first, and the heat of stomach diminished after a few hours, but the other symptoms continued. Two spoonful of a mixture, consisting of equal parts of vinegar and thick mucilage. He was calmer during the night—his head was clearer, and the anxiety diminished; copious sweating came on, followed by sleep, after which he became much better. The pulse, however, continued full and frequent, and the voiding of the urine difficult. A light infusion of digitales, with acetate of potass, was now given, and under this treatment the patient recovered in a few days.—*Rust's Magazin*.

JAUNDICE PRODUCED BY A MORAL
CAUSE.

A young man, aged 25, was passing along the street when something fell at his feet; it was a person who had fallen from the second floor of a house. This made such an impression on the patient that he had nearly fainted, and soon a jaundiced appearance became manifest in the sclerotic coat, which successively spread to other parts of the body. Nevertheless, none of the functions were disturbed; the right hypochon-

drium remained soft and without pain. The jaundice gradually disappeared under the use of gentle remedies.—*La Lancette*.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Case of Fracture, with Dislocation of the sixth Cervical Vetebra, which terminated fatally forty-eight hours after the accident.

JAMES CAMARON, a stout muscular man, forty years of age, was brought to the hospital on the forenoon of Friday, January 28th, and placed in Accident Ward as a patient of Mr. Morgan's, having, as it was stated by his friends, sustained an injury to his back, from a fall, whilst employed at his business, being that of a ship-builder, in Greenland Dock. The account we received from the patient was, that he was leaning forward at the time he fell, and alighted on the back part of his neck and shoulders, with his head bent upon his chest, the distance of the fall being only about ten feet. He remained (to use his own words) stunned for nearly the space of five minutes, and on recovering, he found that he had no use of his lower limbs; there was also a good deal of blood upon the boards, but he could not tell from whence it came. As there was some coagulated blood on his nostrils, we imagine it must have proceeded from that quarter. The accident happened about nine o'clock on the morning of the same day of his being received into the hospital.

When admitted, the lower extremities were found to be completely paralysed; deprived both of sensation and voluntary motion; breathing laborious; pulse small, and only 48 beats in a minute, but it soon afterwards rose and became more ample. He was seen by Mr. Callaway, but the precise nature of the accident was not determined; no doubt, however, existed as to there being considerable injury of the spinal marrow. There was no irregularity of the spinous processes laterally, and all that could be felt was a slight indentation at the lower part of the neck in the course of the spinal column; he had complete priapism, but of which he was unconscious; the erection continued for about five or six hours after his admission. On the following day he was visited by Mr. Morgan, who on examination, and taking into consideration the whole circumstances of the case, pronounced it to be of too severe a nature to attempt any relief by a manual-operation, and gave it as his opinion, that there was a division of the

medulla spinalis. The symptoms which he was now laboring under are as follow:—pulse 98, rather full but compressible; complaints of a severe pain at the back part of the head; upper and lower extremities paralysed, the former came on gradually; first he lost the use of the fingers, then the forearm, and subsequently the whole extremity of either side; breathing short and laborious, performed entirely without the aid of the intercostal muscles; integuments of the abdomen and chest as far up as the middle of the pectoral muscles, devoid of sensation; mucous rattle in the bronchiæ; the exertion of the muscles, necessary to the action of speaking, produces much pain; retention of urine; no evacuation from the bowels since admission; slept a little towards the morning; from this time the breathing became worse, and also the mucous rattle; the pulse small and quick, upwards of a hundred. The treatment adopted in this case has been cupping on the back near the seat of injury, and the abstraction of blood from the arm, with the administration of aperient medicines, composed of colocynth and calomel, and a colocynth enema injected per anum, with the use of the catheter: the latter he expressed an almost constant desire to have renewed immediately after its removal from the bladder. After the bowels had been acted upon by the medicine, the fæces passed off involuntarily, but there was no stillatitious discharge of the urine up to his death, nor distention of the abdomen. The patient was quite sensible up to the last hour of his existence;—he expired about nine o'clock on Sunday morning, having survived the accident eight and forty hours.

Post Mortem Examination, 28 hours after death.—There was nothing remarkable in the abdominal viscera farther than a slight vascularity of the mucous membrane of the bladder, not however extending over the whole of its surface; the fundus appeared healthy; the viscus contained about half a pint of urine; the membranes covering the brain were somewhat congestive, especially the dura mater. On examination of the seat of injury in the back, there was observed a good deal of ecchymosis among the long muscles, and also effusion of blood upon the theca for some way along the spine. The sixth cervical vetebra driven forwards, with fracture of the articulating processes, and its bony arch had completely separated the spinal marrow, but the theca continued whole, thus proving the assertion of Mr. Morgan to be correct, and accounting for all the symptoms from which the poor fellow suffered.

Urethral Fistula, with diseased Cellular Membrane of the Pelvis.

James Wade, æt. 40, a very healthy looking countryman, was admitted, under Mr.

Key, Oct. 7th, 1829. Some time after suspicious intercourse, he had a discharge from his urethra, which produced stricture; and he has been more or less troubled by this for the last three or four years. An abscess formed in perineo, and he has ever since had a fistulous opening at that part. Many instruments have been at different times introduced into his bladder, and occasionally with much force. He now complains of pain, and much difficulty in making water, the stream being usually split, sometimes of other irregular shapes. There is an opening, about two inches, before the anus, down which a probe may be passed towards the prostate gland.

Cap. Ol. Ricini 3vj. p. r. n. donec alous spontè spiuta sit.

Oct. 10.—A sound was passed through a firm stricture anterior to the triangular ligament; and on the 13th a larger one entered the cavity of the bladder. A probe passed at this time into the fistula, for the extent of three inches, appeared to enter the urethra a little anterior to the prostate gland.

On the 28th Mr. Key ran a red hot wire to the very end of the fistula, and kept it in about twenty seconds. The pain was momentary, and the man declared less severe than the passage of sounds.

R Træ. Hyosc. ℥xxx. ex. Mist. Salina 6tis quibus horis sum.

And let him constantly wear a large elastic catheter.

29th.—He has slept well, and is quite free from any unpleasant symptoms. The urine passes through the catheter quite readily.

30th.—During the night he either himself took out, or allowed the catheter to escape; and early this morning, thinking his bowels confined, he asked the nurse for some house-medicine, which was very improperly given him. He afterwards, too, rose from his bed, and frequently went to the water-closet. After this it was not surprising to find him this morning very feverish, with some tenderness of the abdomen. He had, in attempting to re-introduce the catheter, produced some inflammation of the prepuce. His urine has passed through the fistula in small quantity. The catheter was again passed with some difficulty, and the urine readily flowed per urethram.

App. Hirud. xxx. ventri, et postea fatus tepidus.

At night he was better; the pain being relieved, and now existing only in the pubic region.

R Hydr. Submur. gr. ij. Opii gr. j. statim et rep. 6tis horis.

31st.—He has had two or three slight rigors, and constant nausea. There is much

tenderness of the whole abdomen. Bowels are open; tongue covered with a white fur. Skin rather hot; Pulse 160, quick, but quite compressible and small. His urine partially dribbles through the fistula.

App. Hirud. xx. abdomini et pergat.

Nov. 1.—During the night he slept only two or three hours, being often disturbed by the copious vomiting of green bile, which still continues. Pulse 145, small and compressible. He complains of general soreness over the abdomen, and of a fixed pain, increased on pressure, in the right hypogastrium. Tongue cleaner, but rather brown; bowels open once this morning; respiration rather hurried; no rigors have returned. Last night he took out the catheter, as the urine passed by its side and through the fistula. There are no symptoms of infiltration. The urine evacuated is dark, and deposits a flocculent sediment; not puriform.

App. Hirud. xx. Regioni Hypogastri, et Fetus calidus.

His pulse became frequent, and even fluttering, after the application of the leeches; but the abdominal pain was so completely removed as not to be excited by firm pressure. The sickness also has ceased.

R Ammon. Subcarb. gr. vj. Tr. Opii, ℥x. Stis horis sumendæ ex Sul. Menthæ.

In the evening he slept a little; was free from pain, and perspiring; but his pulse did not improve in character.

Nov. 2.—Last night vomiting recurred, so as to prevent his sleeping; and this morning he is greatly exhausted. Pulse very frequent and fluttering, indeed scarcely perceptible. The pain entirely ceased at nine o'clock, when much dyspnoea came on, with coldness of the extremities; a scarcely perceptible pulse, and a dim wandering eye. At eleven he died.

Nov. 4th.—His body was inspected. The peritoneum had arborescent vascular injections in various places, with a puriform, and in some parts plastic secretion. Firm bands joined the bladder and rectum together, inclosing a cavity in which was pus, as well as smaller ones in the lateral directions. Each of these communicated with the neck of the bladder, just at the third lobe of the prostate. This gland was ulcerated and pierced, in more than one place, by the instruments formerly used, as their appearance proved. The mucous membrane of the bladder was thickened, ulcerated, and vascular. Inflammation and ulceration had extended into the membranous portion of the urethra, just behind which the fistula opened; and there was a firm long stricture opposite the bulb. Rest of the body pretty healthy.

ST. GEORGE'S HOSPITAL.

Fatal Peritonitis, apparently excited by a Psoas Abscess.

In our last report from this hospital we detailed two cases of peritonitis, the one arising from perforation of the small intestine in the progress of fever, the other accompanied by tubercular accretions. The present case differs, in many points, from either of the preceding, and is not unworthy the attention of our readers.

CASE.—John Keary, æt. 49, a servant, in Harris's Ward, bed No. 9, placed under the care of Dr. Hewett on the 2d of Jan. last.

Complains of pain in the epigastrium; tenderness on pressure over left lobe of liver, which appears to be enlarged; no increase of pain on sitting up; abdomen slightly tumid and tense; pulse of some size and fulness, rather quick; skin warm and dry; tongue dry, brown in the centre and red at the sides and tip; two evacuations during the night; urine clear.

Has been an in-patient for some time, with stricture, and been treated with caustic bougies by Mr. Brodie. Was so well three weeks before Christmas last as to consider himself cured; but in the course of a week, began to suffer from acidity at the stomach, and other dyspeptic symptoms, for which he was ordered the Plummer's pill, &c. Also seems to have suffered some time ago from pains in the back, like those of lumbago. Was doing pretty well until this morning at four o'clock, when he was seized with a rigor, which lasted two hours. The pain in the belly appeared soon afterwards, and has since continued. Nothing has been done for it.

V. S. statim ad 3vij. vel. x.

R Hyd. Submur. gr. x. Sacch. Alb. gr. xv.
M. ft. pulv. statim sum. et 6tis hor. rep.
per ij. vel iij. vices.

Hirud. xiv. Epig vespere. Fetus.

R Liq. Op. Sed. ℥xij. Aq. Distill. 3xi.
Syrup. 3j M. h. s. s.

Jan. 3d.—Blood cupped and a little buffy. Leeches bled freely. Has taken three powders; the last at two o'clock this morning. Felt much relieved by bleeding, and abdomen now bears pressure every where except just in hypogastrium. Skin harsh and unperspiring; tongue become moist, but still brownish; no evacuation.

Ol. Ric. ʒss. statim et 4tis hor. rep. donec
dej. alv. Enema Ol. vesp. nisi inte-
rim, &c.

Fetus. Omittr. alia.

Hirud. xij. vesp. si pers. hypog. dolor.

One stool was procured in the evening, and a dark one next morning. The pulse was become soft, the tongue less brown, the skin more perspiring, but still some uneasiness on pressure of the hypogastrium remained; and sixteen leeches were again

applied to the abdomen. A dose of castor oil was also given, and one drachm ordered to be taken every morning. The patient was allowed weak broth. On the 7th, the only unpleasant symptom that remained was some tenderness on pressure of the enlarged liver. A large blister was placed on the epigastric region, and the ulcerated surface dressed with the mercurial ointment twice daily. This treatment induced some ptyalism, which the patient had not hitherto experienced, and on the 14th he was so well as to be again returned to the charge of Mr. Brodie.

Those who watched this case were equally surprised and gratified at the result, for its aspect was extremely unfavorable when it first fell into the hands of Dr. Hewett. Their congratulations, however, were short-lived and premature; for on the morning of the 21st, having been previously in better health than he had enjoyed for some time, he was suddenly attacked anew by the peritoneal symptoms. Mr. Hutchins immediately directed him to be bled, and gave him half a scruple of calomel; but he rapidly sunk, and died in the afternoon. The most prominent symptoms of this relapse were, tenderness on pressure in the hypogastric region, and extreme prostration.

Sectio Cadaveris, 21st, 2 P.M.—Body emaciated, but not to extreme degree; belly rather tumid.

Abdomen.—Some dirty-looking puriform fluid in the peritoneal cavity; lymph here and there; partial injections of the peritoneum lining viscera; general adhesions—partly recent, partly not so—of liver to diaphragm, stomach, and duodenum; purulent fluid in the interstices of the adhesions.

Liver enlarged, pale, granular—in short, that of a dram-drinker. Gall-bladder not enlarged; ducts perceptibly so. At the entrance of the choledoch and pancreatic ducts into the duodenum, was a round projection, not unlike the os tinæ; in the centre of this was the opening of the two ducts, which seemed somewhat straightened by vascular turgescence of the surrounding cellular membrane. Coats of the duodenum decidedly thickened, and the central apparently œdematous.

Stretching from the pancreas to the promontory of the sacrum, and along the iliac vessels on the right side to the groin, was a more or less irregular, indurated mass, soft and fluctuating in some parts, cartilaginous in others. It was evidently composed of indurated and diseased glands, which had suppurated here and there, and were involved in a kind of cartilaginous matrix, formed from the cellular membrane. The ureters were more or less connected with the indurated mass on either side, but were not diseased, or in any way altered. The aorta and vena cava passed behind it, closely at-

tached to it in front and at the sides, but not narrowed or compressed in the least.

Some thick yellow pus in centre of left psoas muscle, opposite second and third lumbar vertebræ. Right psoas, from its highest origin to the groin, more or less excavated by pus, and forming a kind of cyst containing it. Body of first lumbar vertebra, on right side, slightly bare; bodies of second and third lumbar vertebræ, on same side, denuded and more or less carious, with bony spiculæ loosely attached to them. On removing the vertebræ in question, they were found to have gained very much in weight; their loose spongy texture being infiltrated with a deposit of new and harder bony matter. Intervertebral cartilages sound.

Kidneys, especially left, rather enlarged, and granular on section.

Thorax.—Pluræ on right side universally united by old adhesions; very slightly so on left. Lungs remarkably dry, but otherwise healthy.

Simple hypertrophy of left ventricle of heart, the parietes of which were at least three-fourths of an inch in thickness; no valvular disease. Arch of aorta slightly dilated; atheromatous deposits in aorta, both thoracic and abdominal.

Cranium not examined.

We have never before seen an instance of psoas abscess proving fatal by exciting peritonitis; though all must have witnessed examples of abscesses in the cellular membrane of the abdominal parietes terminating in that manner. The reason, we suppose, will be found in the fact that the psoas abscess is generally contained, more or less, in the centre of the muscle; in consequence of which, the matter does not come into contact with, or even very close proximity to, the peritoneum. In the present case, the state of the liver would likewise appear to have been a cause of inflammation; for the greatest quantity of pus and lymph was certainly in the neighbourhood of that viscus. In our next report we will detail the particulars of a case of chronic scrofulous inflammation of the peritoneum, in a child; who was examined on the same day as the present patient.

WORCESTER INFIRMARY.

Aneurism—Ligature of the Femoral Artery—Amputation—Recovery.

JOHN MILNER, æt. 30, was admitted into the Worcester Infirmary, Sunday, Oct. 3, under the care of Mr. Pierpoint. Is a hard-working man, and accustomed to lift great weights; thinks himself healthy in general, but has had asthma from his birth. About five weeks ago he was attacked with pain just above the knee, extending to about the middle of the thigh, where he said there was a small hard lump, in which he felt a beat-

ing, particularly when he pressed his hand upon it, in the act of milking. He says that ever since a kick which he received from a horse, 20 years ago, there has been a tumor, about the size of a large pea, about the middle of his thigh. Had advice for it a month since. Leeches and blisters were applied at different times. The thigh was rolled up, under the pressure of which it began to swell exceedingly; six days since, supposing the tumor to be an abscess, a lancet was introduced, and a little coagulated blood came away; and on the following day the wound burst, and about three pints of blood gushed out, and then stopped spontaneously. The wound was then closed, and the limb bound up exceedingly tight. A tumor now extends from above the middle of the thigh to the knee, distinctly pulsating, and a blush of inflammation upon the superjacent skin. The œdema extends nearly up to the groin; the opening in the inner part of the tumor, about the size of a shilling, and a dark speck of coagulum visible, which pulsates very perceptibly. Pulse very languid, some cough, countenance sallow, exhibits some marks of distress.

4th.—Pulse very languid, bowels open, no pain in the tumor since the bleeding, but some stiffness in the limb. Has lost no blood since Monday last. The femoral artery was tied at three o'clock p.m.; it was taken up about an inch below Poupart's ligament. Took some brandy and water during the operation. Œdema as much as before; the lower part of the thigh, in the neighbourhood of the tumor, extremely distended. The wound united by sutures and adhesive plaister.

Applic. catapl. com. vulneri ulcerato.

Eight o'clock, vespere.—Leg warm; has had a sensation till now as if a heavy weight was upon his leg; seems very comfortable.

Sumt. Tinct. Opii $\mathfrak{m}\mathfrak{x}\mathfrak{i}$. statim.

Eleven o'clock.—Rep. Tinct. Opii.

5th.—Has had a pretty good night. No pain in the extremity. The temperature of the limb operated upon, in the ham, is 95; that of the sound limb is 98. Countenance much improved, speaks cheerfully, pulse 100, tongue clean.

6th.—Thigh much less loaded; grumous discharge from the opening in the tumor; pulse 98. Has passed the night comfortably, with much sleep.

Contin. remedia externa. Dieta tenuis.

7th.—Limb very warm, and no pain; discharge rather copious from the opening in the tumor; the wound has the same appearance; limb much swollen, the tumor consequently more apparent. No pulsation in the limb since the operation, and hardly any inflammation about the skin. Pulse 104, tongue clean, bowels open.

8th.—Has passed a good night; thigh easy and more vigorous, pulse 98, tongue

clean; œdema of the thigh considerably decreased; discharge great from the inferior opening; the superior one is looking pale, and not much union; was dressed to-day. No perceptible difference in the lower extremities. Has been much purged; four dejections this morning.

Rx Conf. Aromat. ℥i. Tinct. Opii ℥x.
Mist. Cretæ ℥i. M. sumt. post sing.
deject. liquid.

9th.—Has had a very good night. Did not take the medicine till last night. He has had only one stool since. Tongue clean; pulse 94. Œdema of the thigh nearly disappeared. Wound in the groin much more vigorous; has assumed a reddish appearance. Very copious discharge from the aneurismal opening.

Contin. haust. 6tis horis.

10th.—Has had a very good night. Discharge from the aneurismal opening very copious. Œdema of thigh nearly gone. A counter-opening was made in thigh, two inches above the ulcerated wound, and an amazing quantity of pus evacuated itself. Pulse 94; tongue clean.

Perstet.

11th.—Limb nearly of the size of the sound one; discharge still copious; particles of coagulum were evacuated from both the lower openings. The wound in the groin looks very healthy. Pulse 96; tongue clean; not purged.

Adde mist. nunc in usu Sulph. Quinin.
gr. i. Contin. remedia externa. Sustineatur carne et cerevisiâ. Illigetur lenitèr femur ligatione.

12th.—Has passed a very good night. Discharge still continues copious. Pulse the same as yesterday; tongue clean; countenance much improved.

Perstet.

13th.—Has had a good night; comfortable in himself. Pulse the same; tongue clean; bowels regular. The discharge from the two lower openings still very profuse. The thigh much diminished since yesterday. The upper wound looks clean and well.

14th.—Slept very well; discharge not quite so copious; pulse the same; tongue clean. A little quantity of coagulum was evacuated. The two lower openings were then laid into one.

Perstet.

15th.—The coagulum, on taking off the dressings, was found protruding through the lower wound. On removing it, it was followed by a large quantity of pus. A gush of arterial blood followed, and continued to well out of the wound. The hæmorrhage was restrained by stuffing the wound with lint.

On a consultation, it was determined to amputate the limb, which was immediately done. Pressure was made on the external

iliac, but the hæmorrhage was by no means restrained during the operation.

Six vessels were tied. The internal circumflex was very large, and bled profusely; the limb was removed close to the trochanter minor; the aneurismal cavity extended about three inches up the stump, between the muscles: he was excessively exhausted, and 80 drops of laudanum, in some brandy and water, were given him. The aneurismal cavity was found, in its lower portion, to the inner condyle; the bone, for the space of three or four inches, was denuded, and considerable absorption had taken place. There were hardly any remains of the aneurismal sac. The inner coat of the popliteal artery was found much diseased, and a ragged opening was discovered in its upper part. Great destruction had taken place in the soft parts around the bone.

Perstet. Latera empl. adhesiv. contingantur; dein cerat. cretæ applic.

He gradually recovered, and was discharged cured, December 31st.

Midland Reporter.

THE RETORT COURTEOUS.

Our readers, no doubt, have fully appreciated Wakley's zeal in the cause of science, as displayed in his performance last week at the Argyll Rooms—which, by the way, we are sorry to find, by a singular fatality, were burnt down next day. The "Fire King," however, not satisfied with what took place on that occasion, proposes the following ingenious mode of deciding the point at issue, and which we make no doubt Mr. Wakley will readily embrace. Instead of taking the Prussic acid himself, he says, "I will administer it to two dogs—and to Mr. Wakley and his assistant—as I should be able to give them my antidote; but they, I fear, could not render me the same assistance did I take poison*." There is a disregard of his former assertions, and a cool impudence in this proposal, which leads us to doubt whether Wakley has the decided superiority over his rival which we had supposed.

* Times, Wednesday.

REMUNERATION OF GENERAL PRACTITIONERS.

We are requested to state, that the Dinner, in celebration of the decision in favor of general practitioners lately obtained in the Court of King's Bench, is to take place on the 2d of March, not on the 3d, as originally intended.

ERRATUM.

By a ridiculous mistake, at p. 578, of our last No. the "bear" was enumerated among the domestic animals susceptible of hydrophobia: it ought to have been the "goat."

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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Medicine and the Collateral Sciences.

SATURDAY, FEBRUARY 20, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XXI.

Specific Diseases.—Scrofula.

I PROCEED, gentlemen, in the next place, to speak to you of *specific diseases*.

Scrofula.

We use the term *scrofula* in two senses; either to designate that assemblage of characters which marks a particular disease, or in order to denote that peculiarity of constitution which is generally original or con-nate—that is, existing at the time of birth—from which such peculiar character of the disease is derived. In this sense, *scrofula* is used as synonymous with *scrofulous* constitution; and hence we speak of *scrofula* existing in a family.

The word *scrofula* is said to be derived from *scrofa*, which is the Latin for a sow; though I do not see any reason why the term applied to the disease that is now about to be considered, should be derived from such a source. The term *struma* is equivalent to *scrofula*, and these two are used indifferently. In this country, popularly, these diseases are often denominated *the king's evil*—or simply *the evil*, from an idea which existed in former times, and which has not been long abolished, that the touch of a royal personage would cure them.

We cannot draw a very marked line of distinction between common and *scrofulous* disease. There is an insensible transition from the one to the other, as in most other cases of disease. The *form* of disease is the same in *scrofula* as in common disease—the difference is in certain *modifications*. *Scrofulous* inflammation is less active and less rapid in its progress than common in-

flammation. The characters of inflammation are less strongly marked here: it wants that firm swelling, that bright red color, and that acute pain, which belong to common inflammation; neither does it in general excite so powerfully those sympathetic influences in other parts of the system, as we observe to take place in common phlegmonous inflammation. Yet, in subjects that appear to be *scrofulous*, we often find inflammation existing, with all its characters pretty strongly marked; in fact, we see occasionally in such subjects, appearances which, as far as the redness, heat, swelling, and pain of the parts go, we should be inclined to call common inflammation. When suppuration occurs in *scrofulous* inflammation, the matter does not so readily and quickly make its way to the surface. You do not find a collection of matter opening on its arrival at the surface, as in cases of phlegmonous inflammation; but you find the skin becomes extensively detached, and when the matter reaches the surface, an opening takes place through a small part of the integument. Now the matter which is discharged from such an opening is different to that produced in healthy inflammation;—it is rather a mucous, or serous, than a purulent fluid; at all events, it is a thin kind of pus, and, very commonly, flaky and curdy substances are mixed with this thin matter. Indeed the collections of fluid that take place in consequence of *scrofulous* inflammation, generally bear the character of chronic rather than of acute abscesses. There is a slowness in coming to the surface, which characterizes abscesses of that kind.

Scrofulous inflammation seldom terminates in mortification; indeed, I fancy it never terminates in mortification simply by the influence of inflammatory action, as in other cases; for *scrofulous* inflammation, when decidedly marked as such, does not seem to admit of that high degree of local action. Yet, in parts affected with *scrofula*, we sometimes see that a part of an affected organ becomes deprived of vitality,

and is converted into a fibrous, dense kind of substance, which separates much as a slough does from other parts: it is a kind of loss of vitality taking place in scrofula peculiar to that form and manner of disease. Chronic inflammation is a frequent disease in scrofulous subjects: there is only a little redness in the inflammation, but there is considerable increase of size. The bulk of the part is augmented often with little injury to the functions of the organ; and you have an enlargement of size, going on for a considerable length of time, without producing any change that is seriously inconvenient to the patient.

When scrofula attacks the internal organs of the body, those of glandular structure, and some others, it frequently shews itself in depositing into the texture of the organ adventitious substances in the particular form to which we give the name *tubercle*. Tubercle means merely swelling; tubercle, which is derived from *tuber*, denotes a slight swelling. The tubercles, then, consist of an adventitious substance, which is generally of a firm consistence and white color, disseminated throughout the parts affected. These small masses are increased; the contiguous ones join; they coalesce, and then assume a greyish color; they afterwards become loosened and softened in texture. A kind of supuration takes place; that is, the tubercular matter is loosened in consistency, separates, and comes away. A peculiar kind of supuration also occurs in the part from which this tubercular matter has been detached, and destruction takes place in the organ in which the process is going on. This is most commonly seen in the lungs; and we often find that the texture of these parts becomes destroyed in consequence of this change. But such tubercular degenerations are seen in other viscera—the liver, the brain, and sometimes the spleen; and, indeed, in all the internal organs.

Scrofulous ulceration is a languid and uncertain process, with a thin, and generally foetid ichorous discharge. The surface of the sore is pale or livid, and there is no appearance of granulation, or the production of substance that should fill up the ulcerated chasm. The margin of the sore may be smooth, red, and elevated. Sometimes the base or edge of the sore is raised a little vertically from the surface; in fact, there is an increased deposition in the part, yet it may not be of that kind to lead to a restorative process. The ulcers which take place after a scrofulous abscess, are indolent, if they be situated in any part of the skin.

The parts which are most susceptible of scrofulous disease are, in the first place, the absorbent glands, more particularly those of the neck and mesentery. The absorbent glands of the groin are much more rarely affected; and those of the axilla are seldom

seen to be the seat of scrofulous disease. Now one of the principal exciting causes of scrofulous disease is exposure to cold; and you will easily see, from that circumstance, a reason why the glands of the neck are so frequently the seat of the scrofulous attack. But this does not explain why the mesenteric glands should be affected, for these are kept warm; the truth is, disorder of the mucous membrane of the alimentary canal is common in scrofulous subjects; and the disease of the mesenteric glands is the consequence of disease in the mucous membrane, from which the absorbents arise. Indeed, it will frequently happen that the affection of the glands is secondary in scrofula as well as in other cases; that although they may appear to us to be disordered primarily, if we come minutely to examine the circumstance, we shall find that the disorder of the absorbent glands is dependent upon some disease existing in the parts from which the absorbent vessels are derived.

Other parts of the glandular structure come to be affected after the absorbent glands. The lips, the eye-lids, the mammary glands of the female, the testicle, and the mucous membranes of the body, are very subject to attacks of scrofulous disease. In those of the eye it is particularly seen, because they are exposed to the external air, and are open to those external influences which are most powerful in producing scrofulous disease. The mucous membranes of the respiratory, and of the digestive organs, are frequently the seat of disease in such subjects. The mucous membrane of the urinary passages is not liable to the same external causes, and therefore we do not observe it to suffer in these cases. The skin, in its morbid affection, shews an obvious affinity to the mucous membrane; thus the skin suffers much in scrofula; I need scarcely say that it is much exposed to all the external causes that are capable of exciting scrofula. The ligaments, the bones, and the joints are often the subjects of scrofula. These are the parts of the frame that are more particularly liable to attacks of scrofulous disease.

The liability to scrofula in that portion of the human race who are subject to it does not extend equally throughout the whole of life; it is confined much to the period of growth, or that portion of time that intervenes between the age of suckling and the age of puberty. In many individuals the whole of this time is a succession of attacks of scrofulous disease in the absorbent glands in the eye, ears, skin, and joints, and very often the disease exists in several of these parts at one and the same time. In individuals who have scrofula exhibiting all these characters, and extending over the whole of the body—who are affected to the period of puberty by successive attacks of scrofulous disease, it is not un-

common to find that such affections cease at this time; and when the changes which then take place are accomplished, the sores are all healed, and the individual becomes quite vigorous. At the same time, however, that this beneficial change, as regards the external disease, takes place at the period of puberty, and that the succession of attacks which the individual has experienced in the absorbent glands, eyes, ears, and skin, are put a stop to, it not uncommonly happens that scrofulous disease is developed in more important parts—in the lungs, the mammary glands, or the testicle.

The great predisposing cause of scrofula is the original peculiarity of constitution. We can have no hesitation in stating this fact *generally*; but we shall find it rather more difficult to point out precisely in what that peculiarity of constitution consists. I have already had occasion to observe to you, that each individual has something peculiar to himself in bodily constitution—that there are several varieties of natural organization in the human species. Now some of these varieties belong to a considerable number of individuals, and in such parties we find, as we might naturally expect, that there is a great degree of susceptibility to particular forms of disease.

The external marks of scrofula are generally considered to be a thin state of the external integuments, so that the cutaneous vessels are distinctly seen ramifying through them. In some individuals the skin is so thin, that the course and ramifications of the several vessels, and the color of the blood they contain, are almost as distinguishable as if the parts were dissected. A thickness of the upper lip, a tumid state of the septum of the nose, a looseness and flexibility of muscular fibre—these are circumstances that are observed in scrofulous individuals; but we cannot say that they distinguish in a clear manner the differences in the elementary composition of the frame from which those various forms of disease that constitute the several manifestations of scrofula can be derived. We observe two kinds of bodily constitution in scrofulous subjects that in some respects are considerably different from each other. One set of scrofulous subjects present a pale and bloated countenance, generally rather a tumid abdomen, a flaccid loose state of the flesh in the muscular parts of the body; there is languidness in the circulation, so that the extremities of the body are cold; indeed there is a kind of torpor in all the organs and functions of the frame, whether bodily or mental. In the other set of scrofulous subjects there is an excess or unnatural color in the face, and in the neck particularly; there is rather an excited and rapid circulation—a circulation that is easily accelerated by any

external influence; there is a rapidity in the performance of the various functions, both bodily and mental: such children often appear to have a development of the intellectual capacity greater than might be expected at their time of life, and all external influences act more powerfully on individuals of this description. Now both these kinds of individuals are called scrofulous; and, in fact, diseases when they take place in them, exhibit to a greater or less degree those particular characters to which the name scrofulous is applicable.

As the individuals most susceptible of scrofula in point of natural constitution are very different, there must be a difference in the disease that takes place in them, and the treatment that should be applied for its removal.

Of all the direct or exciting causes of scrofula, cold is the most powerful, and more particularly cold when combined with moisture. Hence considerable vicissitudes of temperature are favorable to the occurrence of scrofulous disease, which consequently is most common in the colder regions of the globe—in countries where the atmosphere is moist and damp, and considerable vicissitudes of temperature are taking place. Great Britain, the northern parts of Germany, and France, are countries in which scrofulous diseases are very common indeed; but certainly scrofula is not confined simply to the situations that I have just mentioned. Professor Beer, of Vienna, states that in cases of ophthalmia occurring in children there, nine out of ten are strumous. Another writer mentions that in his apprehension the proportion of cases of strumous ophthalmia is very great. I have been informed that Dr. Gregory, of Edinburgh, used to say, that he believed there was not a single family in which scrofula did not exist. Dr. J. Thompson, of Edinburgh, in speaking of inflammation, says—"It is rare to meet with an individual who has not, at some period of life, experienced disease in some shape or other belonging to one of the several forms of scrofula." If these statements be correct, scrofula must be the most common of all the diseases that we have to treat. In warm countries, scrofulous disease is less frequent than in the climates that I have just mentioned, though such countries are by no means exempt from it; for cold is only one of the causes of scrofula, and there are several others. The inhabitants of warmer regions may be exposed to several of the other exciting causes of scrofula, so that, I believe, even in warm countries, those in which the atmosphere is more congenial to the human frame than in our own island, where the climate is not such as is supposed to be peculiarly favorable to scrofulous diseases, yet scrofula

is tolerably abundant even there. It happens from the causes I have mentioned, that the natives of warm climates suffer much from a disease which in all respects is like scrofula, when they come to colder regions—negroes, for example, many of whom, when they come to this country, fall victims to a disease that we cannot distinguish from scrofula. And, I may add, that the same disease is noticed in those who by some have been considered half brothers to the negroes—namely, monkeys. These are all natives of warmer parts of the earth, and when they come to pass a year or two in such an atmosphere as Great Britain, they suffer severely from this disease; and if we examine their bodies after death, we shall find changes that we consider very much like scrofula in the human subject taking place throughout the viscera of the body, and I have very often seen a disease in the bones of monkeys like scrofula in the human subject. For the same reason we find that scrofulous patients suffer more at one season of the year than at another. Their complaints are aggravated in winter and in spring, while they are better in summer and in autumn.

The next in order among the exciting causes of scrofula is, *insufficient and unwholesome food, and excess or irregularity in point of diet*. These causes tend to disorder the mucous membrane of the alimentary canal, which is so liable to be affected in scrofulous subjects. Thus the nutrition of the body becomes vitiated at its source, and we cannot be surprised if we consider their naturally defective constitution, and that the sources from which the nutriment of the body is derived are thus primarily affected with disease—we cannot wonder, I say, at the forms in which the disease shews itself in the bodies of such individuals. The effect of this cause is no doubt aggravated by *sedentary habits and neglect of dress*. It often happens that parents are over anxious that their offspring should commence their studies; that they should begin to employ their time in attention to the various pursuits of learning. Thus children are led to devote a portion of time to those sedentary pursuits which their natural buoyancy of spirit would otherwise lead them to occupy in active exercises, and I think it would tend much more to the advantage of the mind, as well as of the body, if they were employed in that way. Then if you come to consider, and particularly notice these three causes—the effect of cold, of bad habits in point of diet, the neglect of exercise and the existence of sedentary pursuits—they produce a state of frame in which there is derangement of the alimentary canal, in which there is a want of circulation, especially as regards the skin, and in which the muscular powers of the frame are not fully

developed: these are leading circumstances in the bodily state of those who are the subjects of scrofulous disease.

Disorder of the digestive organs, a pallid state of the skin, a loose and flaccid condition of the muscles of the body when they separately exist or act in conjunction in a considerable degree, are capable of producing a state of frame which we cannot distinguish from that which belongs originally, and from the time of birth to other individuals. Thus in those subjects in whom there is no natural peculiarity of constitution of a scrofulous kind observed, a sort of acquired scrofula may be superinduced in this way. The crowded dwellings which are inhabited by the poor, the confined situations they live in, their deficient and unwholesome nourishment, the insufficient clothing they have, their want of fire and warmth during the winter, really bring on in their children a state of the digestive, the cutaneous, and the muscular systems, which cannot be distinguished from that which belongs to patients who are born scrofulous.

The notion of *debility* has been very generally entertained by professional men as the cause of scrofula, and the source of the various sufferings to which scrofulous individuals are subject. Hence it has been too often the case that when a scrofulous disease, or one supposed to be scrofulous, is met with, the patient is directed to take tonic medicines, and to eat animal food and drink fermented liquors; and in many persons the idea seems to prevail that the more, both of tonic medicines and of these stimulating articles of food, that can be taken into the stomach, the better for the individual. I cannot, for my own part, imagine an opinion more entirely erroneous than this; and I conceive we should be much nearer the truth if we said that scrofulous subjects should not take tonic medicines at all, nor the kind of diet alluded to. I say, in a comparison of these two statements, the latter would be nearer to the truth, and more safe practice than the rule of stuffing the scrofulous patients with tonic and stimulating medicines, and allowing them to take into their stomachs as much animal food and fermented liquors as they can possibly swallow. The state of a scrofulous subject is certainly in one point of view that of debility. Scrofulous subjects are not capable of doing or bearing much: but although individuals are not capable of doing or bearing much, and so far they may be said to be weak, you are to consider that the organs of scrofulous subjects are more easily excited; they will bear external agents less than other persons. How can you expect that the stronger kind of medicines, bark, &c. can be borne by the alimentary canals of such subjects? How can you expect that individuals of this excitability of system can bear large quantities of sti-

mulating kinds of food? The notion, in my opinion, is altogether unreasonable. Unquestionably the regulation of the diet, and the selection of the articles that are to constitute the food, are circumstances of great consequence in the treatment of scrofulous individuals. The diet should be of a nutritious but not of a stimulating or exciting kind. A mixed diet of animal and vegetable food has been found by the experience of all ages, and all countries, to be the best suited to the human organization. I see no reason whatever, therefore, for prohibiting scrofulous subjects from taking vegetable aliment; a moderate portion of the lighter kinds of animal food, taken once a-day, and the mixture of it with well dressed vegetables, bread and milk, farinaceous articles, and ripe fruits—these are the kinds of articles that should form the diet of scrofulous individuals. Certainly in many instances, particularly those of the excitable kind of scrofulous subjects, animal food can hardly be borne every day. There are many such individuals to whom we should only allow meat every second day, and their diet on other days should consist of bread and milk, and other farinaceous articles, and well dressed vegetables and fruits. The quantity of food, of course, must be carefully attended to. Children are not able to determine this point for themselves; indeed, grown-up persons do not judge with the greatest possible propriety on that point. The time of taking food must also be attended to. In younger children perhaps food might be allowed four times a-day, but in those a little older, it is sufficient to allow food three times a-day, nothing being taken in the intervals between the meals.

In respect to *medical* treatment, we shall find in general that there is a disturbed state of the alimentary canal, and frequently some part of the canal is loaded with unhealthy secretions. Therefore the first object is to clear the intestines of such accumulation; to free the bowels, and to employ such means as will generally improve and assist them in the regular performance of their functions. Now because a person is said to be scrofulous, and scrofulous subjects are supposed to be weak, you are not to imagine that in the state of disorder of the alimentary canal, which you frequently find in such persons, very mild aperient medicines will be sufficient. It is often necessary to employ strong cathartic medicines, and these in considerable doses in young subjects—not invariably, but frequently; and particularly so if there be a foul tongue, and an offensive state of the breath, indicating an unhealthy condition of the alimentary canal, more especially if there should be combined with these circumstances a tumid and enlarged state of the abdomen. You must administer calomel in combination with

rhubarb or jalap, or calomel with antimony, followed by the ordinary draught of senna and salts, or castor oil; and you must repeat these medicines till you get rid of the accumulation. You must first then clear away the contents of the bowels; and after you have done this, milder means will suffice to ensure their regular action. A grain of calomel, or a few grains of hydr. c. creta, given twice a week, exhibiting at other times mild aperients suited to the case. The compound decoction of aloes is a good medicine in such cases, given in the middle of the day, or a little before dinner.

The object, after you have once cleared the alimentary canal, is simply to ensure the regular action of the bowels; not to purge them—you do not require that—but, in conjunction with the attention you pay to diet, the residue of the alimentary matters taken into the stomach should be regularly expelled from the bowels; and that does not require very active means.

Then, in certain circumstances, it may be expedient to give medicines of a tonic or strengthening kind; and if the tongue be clean, you may safely administer these. If you have cleared the alimentary canal, and got a clean state of the tongue, and the patient remains pallid and feeble; if the skin is cold, and there is a defective circulation in reference to the surface, you may administer tonic medicines—perhaps steel and mineral acids. The best of these tonics is infusion of Cascarella with dilute nitric acid;—or sulphuric acid may be given, in the infusion of roses. Ammoniated tincture of iron, bark, columba, and gentian, are tonics that are frequently given under such circumstances. Great confidence has been heretofore reposed in bark, in the treatment of scrofulous subjects; but I believe it possesses nothing particular in its powers: it is capable of doing nothing that may not be effected by other medicines. With these tonics, mild aperients may be associated. Rhubarb may be advantageously joined with carbonate of iron. If there be acidity, it may be advantageous to give alkalies, in conjunction with bitter tonics. It would seem that the principles of modern practice, even in ordinary cases, are not clearly established. Alkalies have enjoyed great reputation in the treatment of scrofula: the hydriodate of potash, and the hydrochlorate of lime, have been used; subsequently, carbonate of ammonia;—all these have been regarded as specifics, and a combination of them with tonics has been employed. Other persons have wisely considered that a medium between the two extremes of the exhibition of acids and alkalies in scrofula, is the most desirable mode of proceeding. Having mentioned these opposite opinions generally, I may refer to my own experience; and probably the truth is, that neither the acids nor the

alkalies are of great importance in such cases: the successful treatment may not depend upon the administration of either of these remedies.

An opinion has often prevailed, that mercury ought not to be given to patients affected with scrofula; that great danger is connected with it, of aggravating the affection and rendering it more obstinate. Certainly I think we cannot dispense with mercury, considered as a purgative, or as a means of restoring the secretions. We often find the most essential service in giving it in an active way, to clear the alimentary canal in the first instance; and, although in milder doses than I have mentioned, it is proper to continue it afterwards. But we may go farther, and state, that in some forms of scrofulous disease, where the affection is active, and is proceeding to changes of structure in the parts and to effects that would lead to serious evil—as in affections of the cornea of the eye, where a deposition is taking place there under scrofulous inflammation—it is often of advantage to carry the mercury so far as to affect the system of the individual, so that we can control the progress of the disease, bring it to an end, and prevent the destruction of the parts: and we do this, as far as I know, without danger to the individual in any other respect; so that I am inclined to think that the notion which has hitherto prevailed, and has been extensively spread, of the peculiarly unfavorable action of mercury on scrofulous individuals, is by no means well founded. When mercury is given in the way I have mentioned, we may employ calomel, in conjunction with James's powders—or hydrar. c. creta. Sometimes the sublimate has been recommended in such cases, given in solution in the proportion of a grain to two ounces of tincture of bark or rhubarb, of which about a tea-spoonful may be taken for a dose.

The state of the skin is a point of particular consequence in the management of scrofulous subjects. We very commonly find the skin dry, harsh, and pallid; a state of the surface in which there is defect in the capillary circulation; where the quantity of blood that should be sent to the surface of the body does not reach it, and where, consequently, the secretions of the skin are deficient. When we consider the great extent of the skin, the importance of its secretions, the quantity of matter that is naturally separated from the body by the cutaneous transpiration, we cannot be surprised that the condition of this part should have a great influence on the health; and in scrofulous subjects we find the skin in a state far from healthy. Under such circumstances, warm bathing is very advantageous; where this cannot be accomplished, washing the skin once a-day with warm water, and rubbing it well, may be resorted to. The in-

dividual in whom such a state of skin exists, should be warmly clothed; more especially in the colder part of the year. It is a very mistaken notion to suppose that the kind of weakness which exists in scrofulous subjects can be remedied by *hardening* them, as it is termed—that is, by allowing them to be exposed to cold and vicissitudes of temperature. The animal powers are comparatively defective—and therefore you suspect, very naturally, that they are not capable of that exertion which is necessary to meet these exigencies and these vicissitudes; neither should they be exposed to them. It is always desirable that scrofulous subjects should have exercise; and therefore I by no means wish that they should be kept at home, or prevented from going out because it is cold; but that they should be allowed to go out and to take exercise, having care that they are so clothed as not to suffer from the cold. It is found, by experiments on animals, that the power of generating heat is less in young subjects than in adults—and it is less in proportion to the early age of the individual. In respect to the great advantages under which the individual is placed, so far as it regards temperature, and also so far as regards a proper supply of healthy nutriment, properly adapted to the purposes of the economy—in these two respects we see, I think, the reason why children, during the period of suckling, do not suffer from scrofula at that time; at all events, children so circumstanced are generally warmly clothed;—the infant is, in a great measure, about the person of the nurse, and has the benefit of the temperature produced by her; so that they do not suffer from cold, and there is a supply of healthy nourishment produced by the hand of nature for them. Thus the two great causes of exciting scrofula under other circumstances—exposure to cold and insufficiency, or an unwholesome kind of nutriment—are prevented, in the case of an infant during suckling.

I have mentioned that exercise should be regularly taken; and, in fact, if you leave children to themselves, they will naturally engage in a variety of active pursuits, by which their muscular system is sufficiently exercised;—and, I think, if any thing like a tendency to a disease of this kind is manifested, parents ought to consider the advantages of education as a secondary thing to that of establishing the health of their children: for nothing like attention to book-learning, or studies, ought to interfere with those rules that are considered necessary to restore and secure health under such circumstances.

These are the general points of management that are applicable to the treatment of strumous individuals. You observe all these are what may be called general rules, whe-

ther in management or medicine ; in fact, as the great cause of scrofulous disease is found in a certain state of constitution, the means that are designed to obviate the disease must be applied to the cause, and must be of a *general* nature. However, we frequently have occasion to apply *local* measures in conjunction with them, though perhaps these may be considered as secondary in point of importance. In the case of simple chronic swelling, without any very active inflammation, it may be sufficient to trust to the general means of management that I have mentioned ; and the parts may be kept warmly covered with soap plaister. When more active inflammation exists, if there is a great degree of redness, and heat, and pain, you must apply mild anti-phlogistic means, according to the degree of inflammatory symptoms. You would apply a few leeches to the part ; you might apply an evaporating wash, or a poultice of bread and water, or linseed afterwards. When suppuration takes place it is necessary to open the collection very quickly. You do not make an absolute rule of this ; but under many circumstances there is a want of disposition to come to the surface ; the collection will extend in circumference, and the difficulties which frequently result from scrofulous abscess will be increased. If you leave it to itself the skin often becomes excessively thin ; and when the swelling forms matter, considerable part of the skin must ulcerate, for it is so far deprived of life that it cannot remain attached to the parts belonging to it. You obviate this by opening the collection pretty early. The languid and unhealthy kind of ulceration which frequently follows after the abscess is broke, or which takes place spontaneously in the skin, very often requires the use of local stimuli or astringents, but it is not by any means universal. Under many circumstances scrofulous ulcers do well by simple local means, such as linseed, or bread poultice, or a simple dressing of soft ointment, or other simple dressings. But when the surface of the skin is pale or livid ; when these signs of deficiency in the restorative process are observed, you may dress the surface of the sore with nitrate of silver, or sulphate of zinc, or red precipitate ointment ; that is, you must apply local stimulants suited to the exigencies of the case. In chronic scrofulous inflammation you often find it necessary to have recourse, in the first place, to mild antiphlogistic treatment ; and afterwards counter irritation ; to blister, to stimulate, or use the measures proposed by rubbing tartar-emetic ointment on the skin.

The mention of this mode leads me to observe, that you see in many instances of scrofula the means which nature employs in the cure of such diseases. You often find that the scrofulous disease in one

part ceases, and there is an appearance of the disease in another neighbouring part. For example, a patient has strumous ophthalmia, and may be suffering much from it. An eruption, with discharge, will take place from the skin behind the ears, and then the eye will get well, and so the disease shifts from one part to another. Now following this hint, you will find that the use of tartar-emetic ointment rubbed on the skin may be advantageously employed ; it produces a disease which will supersede that which has already existed, and it is a powerful means of relieving strumous ophthalmia when it is applied behind the ears, or at the back of the neck. And I have heard of individuals, who have employed it still more extensively. For example : for affections of the glands of the neck, they produce an eruption by rubbing tartar emetic on the arms ; and in case of its appearing lower on the body, they use it so as to produce a copious eruption on the thighs. This is an imitation of the process which nature herself employs in the cure of these affections.

ANALYSES & NOTICES OF BOOKS.

“ L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

A Treatise on Poisons, in relation to Medical Jurisprudence, Physiology, and the Practice of Physic. By ROBERT CHRISTISON, M.D. Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.

[Continued from p. 600.]

IN a former article we gave an account of the first part of Dr. Christison's interesting work, that, namely, which refers to poisoning in *general*. We purpose in the present and future articles, (for the subject is too extensive and important to be hastily dismissed), to direct the attention of our readers to the history of individual poisons. The classification of these adopted by our author is that of Orfila,—with the exception of the last division, proposed by the French toxicologist, namely, *septics or putrefiants*,—which are omitted in the work before us, because Dr. Christison is of opinion that no poison can produce putrefaction in the living body, a position in the accuracy of which it is almost unnecessary to say, we fully concur. The arrangement of poisons, then,

stands thus—*irritants, narcotics, and nartotico-acrids.*

The irritant poisons are very numerous, comprehending the mineral acids; and the bases of some of these, as phosphorus, chlorine, and iodine; oxalic acid; the fixed alkalies; alkaline sulphurets; the metals, especially arsenic, mercury, copper, lead, and antimony; baryta; cantharides; poisonous fish; venomous serpents, &c. &c. Of some of these only we shall be able to speak; but before entering on the history of any of them individually, it may be well to notice some general circumstances.

The symptoms common to this class of substances are well known to consist in violent irritation and inflammation of some part of the intestinal canal, the particular part affected varying very much, according to the poison administered, and other circumstances. Some times, but rarely, the alimentary canal is affected throughout its whole extent. Next to the direct effects thus produced, those most frequently met with are inflammation of the air passages, and disturbance of the urinary organs, especially strangury. Supposing, then, that these general results are sufficiently known to our readers, there remains this very important question connected with them—may not similar phenomena be produced by causes wholly unconnected with poison? Do these admit of being distinguished; and if so, in what manner is such distinction to be made?

The first question is easily answered in the affirmative; and among the other causes producing effects more or less analogous to poisoning, we find “distention and rupture of the stomach; rupture of the duodenum; the effects of drinking cold water; bilious vomiting and cholera; inflammation of the stomach; inflammation of the intestines; inflammation of the peritonæum; spontaneous perforation of the stomach; melæna and hæmatemesis; colic, iliac passion, and obstructed intestine.”

Mere *distention of the stomach* from excess, may prove suddenly fatal. For the most part, indeed, this cause produces apoplexy, but it is capable of extinguishing life without this; at least there are cases in which no apoplectic symptoms are developed, and in which no morbid appearances can be detected in the brain. Sir E. Home mentions the case of a child who was left by its nurse be-

side an apple-pie; in a few minutes after, the child was found dead, and nothing was discovered to account for the fatal event except the enormous distention of the stomach with pie. Other instances, of a similar kind, are on record; but as the appearances on dissection are so distinct from those produced by the irritant poisons, we think it unnecessary to dwell upon them.

Rupture of the stomach, though not common, appears sometimes to take place, independently of previous disease, from mere distention, with efforts to vomit. The entrance of the gullet becomes obstructed when the viscus is immoderately filled, owing to the oblique manner in which, under such circumstances, the œsophagus enters the stomach.

“A striking case of this kind is related by Dr. Lalleman, in his *Inaugural Dissertation* at Paris, in 1818. A woman convalescent from a long attack of dyspepsia, being desirous to make amends for her long privations as to diet, ate one day to satiety. Ere long she was seized with a sense of weight in the stomach, nausea, and fruitless efforts to vomit. Then she all at once uttered a piercing shriek, and exclaimed that she felt her stomach tearing open; afterwards she ceased to make efforts to vomit, soon became insensible, and in the course of the night she expired. In the fore part of the stomach there was a laceration five inches long, and a great deal of half-digested food had escaped into the cavity of the abdomen. The coats of the body of the stomach were healthy; but the pylorus, or opening into the intestines, was indurated; which had been the cause of her dyspepsia.”

From the history of other cases, our author is led to infer that the rupture sometimes occurs from the formation of large quantities of gas, as in cattle fed on wet clover; and yet another form of rupture is related by Mr. Chevalier, in the *Medical and Chirurgical Transactions*.

“A youth of fourteen, on the evening after a Christmas feast, at which he ate and drank heartily, was attacked with violent and frequent vomiting. Next morning he said he felt as if the blood in his heart was boiling; he was unable to swallow, the pulse became irregular, and pressure on the heart or stomach caused excruciating agony. These

symptoms continued till the following day, when he vomited two pounds of blood at successive intervals, and soon afterwards expired. The inner coat of the stomach was torn in many places, and that of the duodenum was lacerated almost completely round. No other disease existed either in the bowels or elsewhere."

In all these cases the appearances after death would be quite sufficient to remove any doubt which the symptoms during life might have created.

Drinking cold water is another cause of sudden death; so sudden, indeed, is the effect, that it is not uncommon for persons to drop instantly, and die on the spot. When the event is so very rapid, there is little danger of its being confounded with poisoning; but in other instances, eating ices, or taking iced drinks, brings on symptoms closely resembling those of irritant poisons. Thus Haller mentions a case where gastritis was brought on by a draught of cold water, and proved fatal at the end of twelve days; and Dr. Duncan gives an instance in which symptoms, exactly like those of cholera, were induced by a similar cause.

"A bookbinder in this city, previously in excellent health, rose one morning at six to kindle his fire, and took a large draught of cold water from a pitcher used in common by the whole family. He went immediately to bed again, complaining of pain in the pit of the stomach, and extreme anxiety, and affected with incessant vomiting. In twelve hours he died, without any material change in the symptoms, and no disease whatever could be detected in the dead body. Dr. Duncan satisfied himself, from general circumstances, that poisoning was quite out of the question; so that, however extraordinary it may appear, his death could be accounted for in no other way than by ascribing it to the cold water."

This case leads us to remark, that *cholera* is the disease most like in its phenomena to poisoning, and accordingly, in trials for murder, it is the one which it is most frequently attempted in the defence to prove that the deceased had labored under. It is unnecessary to enter into a description of this disease; suffice it to point out in what it differs from poisoning. In cholera, the sense of acridity does not precede the vomiting; in poisoning, it *sometimes* does. In cho-

lera, this feeling is produced by the matters vomited irritating the throat, or by the irritation being propagated from the stomach; but, at all events, it is *never* present before the vomiting.

In cholera, the matters ejected are never bloody; such, at least, is the result of extensive investigations made by Dr. Christison, though he leaves the point open to future correction. In cholera, death very rarely takes place so soon as it does from irritant poisoning; in the former, as regards this country, says our author, "death within three days is very rare indeed," while in the latter it is seldom delayed beyond two days and a half, and sometimes happens within twelve hours or less. We would take the liberty of pointing out to Dr. Christison some cases of cholera which occurred at Clapham last autumn, and which were related in the Gazette, vol. iv. p. 375 and 410. As a general rule, the statement of our author is undoubtedly correct; but as there are well authenticated exceptions, nothing beyond probable inferences can be drawn from it. The insufficiency of the diagnostic marks proposed by our author, shew very strongly the difficulty of making the distinction.

Inflammation of the Stomach and Bowels, arising from natural causes, are chiefly to be distinguished from cases of poisoning by the post mortem appearances. Redness of the mucous membrane is one of the most remarkable phenomena, and has been too generally looked upon as necessarily indicative of inflammation. Dr. Yelloly and others have directed attention to this subject, but the most important work is that of M. Billard*, who says that "redness is to be accounted inflammatory only when it occurs in parts not depending in position, or is not limited to such depending parts; when the mesenteric veins supplying the part are not distended, nor the great abdominal veins obstructed at the time of death; when the red membrane is covered with much mucus, particularly with thick, tenacious, and adhering mucus; when the mucous membrane itself is opaque, so that when dissected off and stretched over the finger, the finger is not visible; when the cellular tissue which connects that membrane with the subjacent muscular membrane is brittle, so that

* De la Membrane Muqueuse Gastro-Intestinale.

the former is easily scratched off with the nail."

Connected with this part of the subject are the remarks which follow with regard to another kind of discoloration.

"It is the effusion under the villous coat of the stomach, and incorporation with its substance, of black, or as it were charred blood, which is thus altered either by the chemical action of the poison or by a vital process. In many cases of poisoning with the mineral acids, oxalic acid, arsenic, corrosive sublimate, and the like, there are found on the villous coat of the stomach little knots and larger irregular patches and streaks, not of a reddish-brown, reddish-black, or violaceous hue, like pseudo-morbid redness, but dark-grayish-black, like the color of coal or melanosis,—accompanied too with elevation of the membrane, frequently with abrasion on the middle of the patches, and surrounded by vascularity. This conjunction of appearances I have never seen in the stomach, unless it had been violently irritated; and several experienced pathologists of my acquaintance agree with me in this statement. It bears a pretty close resemblance to melanosis of the stomach*; but is distinguished by the melanotic blackness being arranged in regular abruptly defined spots, and still better by melanosis not being preceded by symptoms of irritation in the stomach."

Spontaneous perforations of the stomach, or other portions of the alimentary canal, are among the most important topics for the medical jurist, and the volume before us contains some judicious observations, which are well deserving his attention. Spontaneous perforations of the stomach occur from scirrhus, or other malignant disease; from simple ulceration; and from the softening or *gelatinization* of the viscus. This last is the most puzzling in investigations of this nature.

"It may be situated on any part of the stomach, but is oftenest seen on the posterior surface. It is sometimes small, more often as big as a half-crown, frequently of the size of the palm, and occasionally so great as to involve an entire half of the stomach. Sometimes there is more than one aperture. The margin is of all shapes, commonly

fringed, and almost always formed of the peritonæum, the other coats being more extensively dissolved. In one instance, however, which has been lately published, the peritonæal surface was on the contrary the most extensively destroyed*; and in a case which occurred in the Infirmary here, and was pointed out to me a few years ago by my late friend Dr. W. Cullen, the peritonæum alone was extensively softened, and partly dissolved, so as to lay the muscular coat bare on its outer surface. The gelatinization therefore sometimes, though very rarely, begins on the outside of the stomach. Internally the hole is surrounded by pulpiness of the mucous coat, generally white, occasionally bluish or blackish, never granulated like an ulcer, very rarely even vascular; and when it is so, the blood may be squeezed out of the loaded vessels. The organs in contact with the hole are also frequently softened. Thus an excavation is sometimes found in the liver or spleen, or the diaphragm is pierced through and through. The margins of the latter holes are quite free from every sign of vascular action, but are generally besmeared with a dark pulpy mass, the remains of the softened tissue. The pulp never smells of gangrene, to which, indeed, this species of softening bears no resemblance. The edge of the hole in the stomach never adheres to the adjoining organ; yet, even when the hole is very large, the contents of the stomach have not always made their escape. Often the dissolution of the coats is incomplete. John Hunter and others, indeed, have said that a stomach is rarely seen without more or less solution of the mucous coat†. The best account of the appearance in this state is given by Jaegar of Stuttgardt‡."

"Now as to the differences between gelatinized perforations, and the perforations caused by the corrosive poisons, it may in the first instance be observed, that the margin of a corroded aperture is commonly of a peculiar color—for example, yellow with nitric acid, brown with sulphuric acid or the alkalis, orange with iodine. But a much better, nay I believe an infallible criterion, and one of universal application, is the

* For a case of this rare and singular disease, see *Edin. Medical and Surgical Journal*, xxvi. 214.

* *Nouvelle Bibliothèque Médicale*, 1838, iii. 141.

† *Philos. Trans.* lxii. 450.

‡ See *Analysis of his Essay*, by Dr. Gumprecht, *Lond. Med. Repos.* x. 416.

following. Either the person dies very soon after the poison is introduced, in which case vital action may not be excited in the stomach, or he lives long enough for the ordinary consequences of violent irritation to ensue. In the former case, as a large quantity of poison must have been taken, and much vomiting cannot have occurred, part of the poison will be found in the stomach. In the latter case, the deep vascularity, or black extravasation round the hole and in other parts of the stomach, will at once distinguish the appearance from a spontaneous aperture. There is no doubt that the stomach may be perforated by the strong corrosives, and yet hardly any of the poison be found in the stomach after death. Thus in a case related by Mertzdorff, of poisoning with sulphuric acid, in which life was prolonged for twelve hours, that gentleman could detect, by minute analysis, only $4\frac{1}{2}$ grains of the acid in the contents and tissue of the stomach. But then the hole was surrounded by signs of vital reaction, and so was the spleen upon which the aperture opened*. Judging from what I have often seen in animals killed with oxalic acid, which is the most rapidly fatal of all the corrosives, so that little time is allowed for vital action, I should say, that no poison can dissolve the stomach, without unequivocal signs of violent irritation of the undissolved parts of the villous coat, which must secure an attentive observer from the mistake of confounding with such appearances the effects of spontaneous erosion. Spontaneous erosion is very generally united with unusual whiteness of the stomach, and there is never any material vascularity."

Particular Poisons.

The *mineral acids* are the first set of poisons considered, as they afford the purest examples of true corrosives, their effects depending entirely on the organic injury which they occasion to the parts with which they come in contact. The only circumstance, however, connected with these to which we shall allude, is the diabolical practice which prevailed some time ago in Scotland, particularly at Glasgow, of throwing concentrated sulphuric acid on the face, for the purpose of maiming, a crime which, by a recent act of parliament, has very properly been made capital.

* Horn's Archiv. für Medizinische Erfahrung, 1823, I. 451.

Oxalic Acid is a poison of great interest, from being so frequently the cause of fatal accidents to us in this country, as well as from its being used for the purposes of suicide. When received into the stomach in its concentrated state, oxalic acid causes exquisite pain, succeeded by violent efforts to vomit, and afterwards by sudden sinking and death. On post-mortem examination, the stomach is seen to contain black extravasated blood, the mucous membrane being of a deep red, with streaks of black extravasation; while in some parts the surface is brittle, and the subjacent stratum "gelatinized" by the chemical action of the acid. When considerably diluted, the poison gives rise to effects entirely different; it now ceases to corrode, and scarcely even irritates, but causes death by its indirect agency on the brain, nervous system, and heart. Palsy of this last is the most prominent symptom when the dose is large, while in smaller quantities it causes death by inducing a tetanic affection, involving the respiratory muscles. These symptoms, it is remarkable, are produced to whatever texture the poison is applied, though the time varies in different instances. It is most rapid in its effects when injected into a vein, and least so when introduced into the cellular tissue. In the human subject, half an ounce is the smallest quantity which has been known to produce death, though it is reasonable to suppose that less than this might do so. Chalk or magnesia should be administered as speedily as possible, as they act both by neutralizing the acid, so as to take away its corrosive power, while by rendering it insoluble, they prevent its entrance into the blood. Warm water *ought not* to be given with a view to cause vomiting, nor, in our author's opinion, ought time to be wasted with the stomach pump.

The *alkalies* and *alkaline salts* come next in succession, our knowledge of which, as poisons, is nearly limited to what has been ascertained by experiments on the lower animals. Caustic potass, which may be taken as an example, when injected into the veins, even in minute portions, coagulates the blood, so that five grains in this way will kill a dog in two minutes. Introduced into the stomach, it is a powerful irritant, corroding the parts with which it comes in contact. The effects of the carbonates of the alkalies are more fre-

quently witnessed, and very nearly resemble those of the concentrated acids. In full doses, the carbonates of the alkalis may produce fatal results in 24, or even in 12 hours; but a much more common occurrence is a chronic form of poisoning, in which constant vomiting takes place, with incessant purging of fluid, often sanguinolent stools, difficulty of swallowing, burning pain from the mouth to the anus, and death, after weeks, or even months, of suffering, the fatal issue being apparently produced by starvation, from the alimentary canal becoming incapable of assimilating any portion of food. Yet another mode in which death may be produced from these poisons is, by their effect on the gullet, where they cause inflammation followed by stricture, which proves incurable. Mr. C. Bell has given three such cases in his *Surgical Observations*. In the treatment of cases of poisoning by the alkalies, weak acids or oil are the proper remedies; both neutralize the alkali, and the latter has the advantage of rendering the vomiting free and easy, converting the poison into a kind of soap. The oil must be given in large quantity.

Ammonia has occasionally acted on the human subject as a poison. Thus Plenck mentions a case in which a "little bottleful" of this substance was poured down the throat of a person who had been bitten by a mad dog; he died in four minutes! A very curious and important fact with regard to ammonia is, that merely holding it to the nostrils has been known to bring on fatal bronchial inflammation.

"A very striking instance of bronchial inflammation, arising from the imprudent and excessive use of ammonia as a stimulant to the nostrils, has been related by the late M. Nysten, and is quoted by Orfila, from the *Gazette de Santé*. A medical man, liable to epilepsy, was found in a fit by his servant, who ignorantly tried to rouse him by holding to his nostrils a handkerchief dipped in ammonia. In this way about two drachms appear to have been consumed. On recovering his senses, the patient complained of burning pain from the mouth downwards to the stomach, great difficulty in swallowing, difficult breathing, hard cough, and copious expectoration, with a serous discharge from the nostrils, and excoriation of the tongue. The bronchitis

increased rapidly, and carried him off in the course of the third day, without convulsions or any mental disorder having supervened*. A case precisely similar is related in the *Edinburgh Medical and Surgical Journal*. A lad, while convalescent from an attack of fever, was seized with epilepsy, for which his attendant applied ammonia under his nose, 'with such unwearied, but destructive benevolence, that suffocation had almost resulted. As it was, dyspnœa, with severe pain of the throat and breast, immediately succeeded; and death took place forty-eight hours afterwards†.' A third instance had been recorded of analogous effects produced by the incautious use of ammonia as an antidote for prussic acid. The patient had all the symptoms of a violent bronchitis, accompanied with redness and scattered ulceration of the mouth and throat; but he recovered in thirteen days‡."

Here we close the present article, and in another number shall pursue the interesting topic through various important branches.

ANALYSES OF BRITISH MEDICAL JOURNALS.

EDINBURGH MEDICAL AND SURGICAL JOURNAL.

January 1830.

THE first paper in the present number is a continuation of Dr. Blackmore's elaborate essay on the Diseases of Plymouth; and which, as on former occasions, we shall pass over.

We next find an article entitled:—

Quarterly Report of the Edinburgh Surgical Hospital from August to November 1829. By JAMES SYME, Esq.

And, although it is rather a misnomer to call it a "report, &c." inasmuch as it contains no account of the cases, yet it is not destitute of interest on two points—namely, some observations on

* Orfila, *Toxicol. Gén.* i. 223.

† *Edinburgh Medical and Surgical Journal*, xiv. 642.

‡ *Revue Médicale*, xvii. 265.

the treatment of ulcers, and an inquiry into the mode in which wounds heal by granulation.

The first of these comprehends the recommendation of rather a novel mode of proceeding, concerning which Mr. Syme thus expresses himself:—

“ It is not unusual to meet with cases of indolent ulcers, which after exhibiting their characteristic obstinacy in opposition to the most careful treatment, heal up at once without any attention, so soon as the limb begins to recover from an attack of phlegmonous erysipelas which it has happened to suffer. The observation of such cases led me to try the effect of inducing a similar inflammation artificially, and the result has fully equalled my expectations. The means employed for this purpose were blisters, and the object being to excite a smart and diffuse inflammation, they were not limited in extent to the size of the sore, but were made to cover a great part of the limb, and were allowed to remain in operation for a long while, sometimes even twenty-four hours.

“ The first effect of the blisters in these cases is a more than ordinary inflammation and discharge, the surface sometimes continuing to suppurate profusely for several days, just as if the cutis had been denuded by a scald or burn.

“ In a day or two the patient is agreeably surprised by observing that the œdematous swelling of the limb, which so constantly accompanies ulcers of the kind under consideration, begins to subside, and in the course of a very short time, rarely exceeding a week or two, it nearly or entirely disappears. The consequence of this detumescence is a great diminution in the size of the sore, which also comes to be on a level with the surrounding skin. Then the surface takes on a healthy granulating appearance, and the sore heals, partly by contraction, partly by the formation of a cicatrix. For the first few days after the blister has been applied, some simple ointment may be used, just as in the ordinary treatment of a blistered surface, and afterwards a wash of acetate of lead or sulphate of zinc, in the proportion of one or two grains to the ounce. If the sore should again prove obstinate, the blister may be repeated, and if a small part remains stationary towards the conclusion of the cure, it

ought to be filled with the red oxide of mercury, or a mixture of this powder with flour. My friend, Professor Davidson, of Aberdeen, induced me to try this application in the treatment of ulcers, and I cannot say too much in its praise, especially in the case just mentioned. After one or two dressings it forms a firm crust over the sore, which ought not to be disturbed, and renders any farther interference unnecessary.

“ I have no hesitation in ascribing the good effect of blisters which have been just described to their stimulating the absorbent vessels, so as to remove the œdema. We know that blisters possess a singular power of doing this, as is exemplified in the cure of dropsies of the joints and bursæ, and it is easy to see that the existence of œdema must be an insuperable obstacle to the healing of the ulcer. It prevents the contractile effect of the granulating action, and thus occasions a struggle, which probably gives rise to the pain and other symptoms that so often induce a resemblance between indolent and irritable ulcers. And we find, in fact, that all the modes of treating the ulcers in question which have ever proved serviceable, such as the horizontal posture, the roller of Underwood and Whateley, or the adhesive straps of Baynton, tend to reduce œdematous swelling.”

The author is of opinion, that reproduction, properly so called, does not take place in the healing of ulcers or wounds, but that lymph is effused on the surface, and organized into a kind of pellicle; that lymph and serum are poured out under this into the cellular tissue, and distend it; that in a healthy ulcer the quantity thus effused is very small, and produces little elevation of the surface, but that in other instances the process is variously modified. Thus, when the action is defective from weakness, the surface is distended with serum, and becomes elevated into spongy granulations. In those again which are “specific” in their action, lymph is effused into the subjacent and surrounding cellular tissues, producing the indurated and elevated edges observed in such ulcers. Other varieties present themselves according to circumstances, but actual reproduction is denied as occurring except in the instance of bone.

A short Abstract of the Prize Essay of Dr. William Horn, of Berlin, on the Poison contained in German Sausages. By R. ARROWSMITH, M.D.

We were very much disappointed on reading this paper to find that after all nothing whatever has been made out by Dr. Horn. That numerous cases of poisoning from eating sausages have occurred in Germany is probably well known to our readers. After a long dissertation, of which the "abstract" occupies very nearly twelve pages, we are told, with respect to the point in question, that "some kind of degeneration may be correctly assumed; and it is highly probable that a principle of a peculiar nature, and poisonous, is thereby developed. *What that principle is, remains to be demonstrated.*"

Case in which Hydatids were contained in the Synovial Sheaths of the Flexor tendons of the Hand. By JAMES RANKINE, M.D.

"Mrs. —, aged 33 years, about five feet six inches high, of a spare but active make, about four years ago was seized, without any assignable cause, with a severe pain situate in the top of the right shoulder, shooting down into the forearm, from which it passed into the hand and wrist, affecting the fingers with much numbness, the two last of which were very painful and drawn down. For the first six months or more the pain of the whole arm, but particularly of the hand and wrist, deprived her of rest and comfort, especially when in bed, which she attributed to the warmth of the bedclothes; and from which circumstance she was persuaded by her neighbours that the disease was rheumatism, and had nothing done for it. One afternoon, all of a sudden, the back of the hand swelled to a considerable size, and broke out into a large crop of red pimples, from the size of a pin point to the size of a pin head, which eruption much relieved the pain of the wrist and fingers. She was advised to apply a poultice over the swelling, which completely reduced it. The whole disease now settled simultaneously in the front of the wrist and palm of the hand, and kept gradually increasing until it attained its present size. There was very little pain for the last three years, until about six months ago, when she began to suffer conside-

rably. During the whole progress of the complaint her general health has continued unimpaired, and she has all along remained at her employment, which is painting in the pot-works. She was in the family way when the complaint began, and has had three children during its continuance.

"On the 7th of July, Mrs. — presented herself to me with the above disease (an outline drawing of which I have prefixed). I found upon examination a large tumor, about the size of a middling orange, flattened, situate under the fascia of the forearm immediately above the part of the wrist, principally on the ulnar side, and close to the annular ligament, by which it seemed to be confined and bound down. In the palm of the hand there appeared another tumor, about the size of a large pigeon's egg, likewise situate beneath the fascia. This tumor had an irregular knotty feel, and when pressed, its contents passed easily into the larger tumor, which might be acted upon in like manner. The tumors were not at all discolored, and the large one had a peculiar doughy, irregular feel, with varicose veins all over its surface and upon the parts adjacent. I had some doubt as to the nature of the tumors, and the propriety of opening them, fearing that their contents might be effused blood, particularly as they had been attended with considerable throbbing pain, and as they had not the evident fluctuation attending the presence of contained matter. I resolved to proceed cautiously.

"Pressing upon the larger tumor, therefore, and causing the smaller one to become hard and tense, I pushed a thick tailor's sewing needle into it, which upon being withdrawn was followed by a small discharge of glutinous amber-colored liquor. Encouraged by this result, I opened the tumor with a small lancet, and to my utter astonishment, upon being pressed, out bounced, like peas from a pop-gun, more than a coffee-cupful of egg-shaped opaque bodies, which upon examination proved to be hydatids from the size of a small pea to that of a middle-sized gooseberry. The relief felt was immediate, and the patient could now extend her finger for the first time for a long period. There was no discharge except these hydatids, and the blood arising from the puncture."

Observations on the Epidemic Eruptive Rheumatic Fever of the West Indies, as it occurred in St. Bartholomew.
By W. H. Cock, M.D.

Dr. Cock gives a very distinct, and apparently accurate account of the singular disease which has of late years prevailed so extensively in the West Indies under the name of "the dandy." Speaking generally, he says—

"The attack was sudden. It commenced by heavy sensations in the eyes, frequent yawning, and redness of the countenance, which were soon followed by shivering, pains in different parts of the body, as the back, the joints of the fingers, toes, knees, &c. The severest pain was in general that experienced in the head. It was in most cases confined to the fore part; but not unfrequently affected the whole. The eyes were ferret, and exhibited much the appearance of intoxication. Such was the excruciating nature of these pains that few had fortitude sufficient to support them without complaint. In my own case the pain in the head was very acute and distressing; and I suffered much from pain in the left humerus, which at the time I compared to the sensation of a pointed instrument boring the bone. The burning torture of a mustard cataplasm, which relieved this most dreadful of all pains which I ever experienced, was so grateful in comparison, that during its operation I fell into a gentle sleep.

"The pain in the head, although constant for the first twenty-four hours, was not, however, always equally severe; but would frequently subside a little, to return in paroxysms of redoubled violence. The lobes of the ears were likewise greatly affected and pained. The toes and fingers frequently suffered much; and when the treatment was not active, remained swelled for several months. The pains of the back were excruciating, and the sensation was as if the vertebræ were torn with violence from each other.

"The stomach was in general but slightly affected. The skin in all cases was dry and parched, the heat above the natural standard, and accompanied with a burning sensation. The tongue was loaded and covered with a white crust, and all inclination for food entirely lost. The pulse was variously affected in different cases. The urine was high-coloured, and the bowels confined. These symptoms, which may be consi-

dered as those of the first stage, continued violent from twenty-four to thirty-six hours, when they gradually subsided, the pains in the joints being the last to leave.

"About the third or fourth day, in many cases, an erythematous eruption appeared on the hands and feet, accompanied with swelling of those parts, and extending over the rest of the body, continued for about thirty-six hours, when it faded, and the cuticle peeled off, as in scarlet fever, leaving a considerable degree of soreness. The soles of the feet were sometimes rendered so sore that walking for many days after restoration to health was attended with pain. A slight febricula was present during the eruption. In many cases the pains again returned after the eruption, and, fixing themselves in one or two joints, remained for several weeks and sometimes months. These pains were not accompanied by evident fever, although I think I noticed the perspiration to be but partial, and the skin in the mornings and evenings drier than what it is in general in this climate. When, however, the practice was sufficiently energetic, the eruption was not only much modified, but these after pains, constituting the rheumatic stage, were generally prevented. Many, however, of the cases in the town ran through all these stages. These were in general such as occurred when medical assistance was not to be had, the physicians being all at the same time attacked by the prevailing malady. When this last stage was established, it was very difficult to remove, and remained in some instances for months, attended with swelling and stiffness of the joints. In one case a partial ankylosis took place in the fingers of the hand. These pains were the most severe in the mornings and evenings. Although the fever was considerable, yet during the first or active stage of the disease the patient frequently complained of cold, and demanded an addition to his coverings. In some cases the glands in the groin were very painful and swelled.

"The attack, as I observed, generally commenced with heavy appearances of the eyes, and a flushed countenance, which was frequently perceived by your friends, who would thence predict your attack before you felt the least symptom of pain. This, however, was not always the case; for pain in the fingers and toes would sometimes precede every

other symptom. In one instance the whole force of the disease was confined to the extremities. The head was not affected, and there was no pain in the back. The pains shifted from one part of the patient's extremities to the other; sometimes attacking him in the knees, sometimes in the toes; sometimes in one toe, sometimes in another; and each invasion of pain was accompanied with twitching of the muscles of the part attacked. The shifting of the pains from one part to the other was attended with an interval of perfect ease. A patient might be conversing calmly with you, when he would suddenly cry out from the severity of the returning pain. This was a solitary case; but in the course of three days, by the use of purgatives, warm bath, sudorifics and frictions, he was restored to perfect health, and never after experienced any pain.

"In children the attack was generally mild, and the third or rheumatic stage was wanting. I do not recollect any fatal case which occurred in children. One child, however, not quite a year old, was very severely attacked, and remained in a comatose state for several hours. He recovered by the use of emetics and calomel. Twenty grains of ipecacuan, given in divided doses, had no effect until five or six grains of calomel had been exhibited. Another child of three or four months was attacked with spasms and twitches of the tendons, and screamed much when touched; but by means of warm bathing, emetics, and laxatives, he soon recovered. The disease proved fatal in some few elderly negroes, and in one or two broken-down constitutions. I did not observe that those who had formerly suffered from rheumatism were more liable to the after-pains than those who had never experienced that disease."

Dr. Cock regards the disease as contagious, and gives some illustrations strongly indicative of its being so. Emetics, purgatives, sudorifics, and blood-letting, were the remedies which proved most effectual.

The above paper is followed by another, on the same subject, by Dr. Furlonge, who adds a case of tetanus nascentium cured by means of sulphate of zinc and opium, the latter being administered both locally and generally.

BIOGRAPHICAL NOTICES.

PROCEEDING with our notices of the most distinguished among the members of our profession who have died during the past year, we have this week to lay before our readers some particulars concerning

THE LATE DR. YOUNG.

DR. YOUNG was, in many respects, a rarely-gifted and extraordinary man. With a mind so happily constituted as to be equally fitted for engaging in any pursuit, or mastering any given branch of human knowledge, he united a degree of perseverance admirably adapted to give full effect to this versatility, and an innate sagacity which enabled him at once to perceive the full extent of every difficulty that impeded his progress, and to overcome it. Hence it was his fortune, or, we should rather say, his distinguishing merit, to attain to nearly equal eminence both in science and in letters. Among geometers and natural philosophers he was unquestionably, if not the first, at least in the very first class; while his great knowledge of the practical application of science to the useful arts, and the business of life, rendered his assistance indispensable to the government whenever it was necessary to obtain accurate information respecting the conduct and management of scientific establishments, proposed improvements in the arts of life, or those particular subjects of legislation which can be regulated only upon scientific principles. In such inquiries and investigations a very considerable portion of his time was latterly occupied; but we may safely refer to the works on science which he has left behind him, and in particular to his *Treatise on Optics*, and his *Lectures on Natural Philosophy*, together with a multitude of papers in the *Transactions of the Royal Society*, as affording ample evidence of the great proficiency to which he had attained both in the pure and in the mixed mathematics. Nor was he less remarkable for his acquirements as a scholar, than for his attainments as a man of science. The friend, and sometimes the companion of Porson, (of whose life, character, and scholarship, he has given a most masterly sketch in the Supplement to the last edition of the *Encyclopædia Britannica*,) it may easily be supposed that he was not un-

acquainted with the language and literature of ancient Greece; and, in point of fact, with the exception of Dr. Parr and one or two others, his illustrious friend left behind him no Grecian superior to Dr. Young. He had read every thing, and he remembered every thing. Nothing which had at any time interested him, and to which he had given his mind, ever escaped from his memory: all his knowledge, indeed, seems to have been written, or rather engraved, as it were, upon a tablet of brass, in indelible characters, which he could read off whenever occasion or necessity required. We do not by any means intend to say that Dr. Young was a man of refined or even of correct taste. On the contrary, he was a sort of practical utilitarian, who invariably neglected the husk or shell in order to get at the kernel, and who never concerned himself about grace, or elegance, or ornament, in his search after truth, or in his attempts to lay up a store of knowledge. The subject-matter of a work alone occupied his attention; and to this he went in the most direct and straight-forward manner possible, without regard to the dress in which it was clothed, or the embellishments with which it was bespangled. Accordingly, he had a much more intimate and thorough acquaintance with the contents of the works of the ancients, and had taken a much more exact measure of the amount of knowledge they possessed respecting different subjects, than perhaps any other man of his day; a circumstance which is clearly evinced in the various papers on questions connected with archæology, with which he enriched the pages of sundry publications, and most especially in the article on "Egypt," which he contributed to the Supplement to the Encyclopædia Britannica; and which we do not scruple to pronounce as altogether the most extraordinary effort of scholarship that modern times can boast.

It was in that celebrated article, which has been read and studied in every part of the civilized world, that he first (in the year 1819) exhibited a digest of those discoveries in Egyptian literature which have immortalized his name, and added a newly-explored region to the vast dominions of knowledge. And, in truth, none can know how much he achieved, except those who have informed themselves how little was done before him. In the multitude of vain

attempts which, in the course of nearly two thousand years, had been made to decipher the inscriptions which cover the monuments, or are contained on the papyri found in the mummies, of the ancient Egyptians, extravagance had succeeded extravagance, and absurdity had followed absurdity, until the subject had at length been abandoned as utterly hopeless and untractable.... At length, in 1814, Dr. Young gave his mind to the subject, and availing himself of some hints thrown out by De Sacy and Akerblad—hints which, had they known how to pursue them, might have enabled those ingenious persons to anticipate the discovery—he soon succeeded in reading the whole of the demotic or enchorial part of the inscription, and immediately published his translation in the *Museum Criticum* of Cambridge. And having achieved this, the most difficult part of his task, the remainder was easy; for the process or method he had employed in reading off the enchorial was, from its very nature, equally applicable to the hieroglyphical branch of the inscription, which he accordingly deciphered and published. The results thus obtained were exceedingly curious; for it was proved beyond the possibility of a doubt, that the proper names in this inscription were spelled alphabetically; that from these an alphabet might be formed; that in the demotic as well as in the hieroglyphic branch, particular groups of characters represented particular words; that these groups were susceptible of decomposition; and that the system of writing used among the ancient Egyptians, was not simple and uniform, but complex and composite, or, in other words, made up of characters some of which were used symbolically, others mimetically, and a third class upon an arbitrary principle, which it was then found impossible to explain. The monument of Philæ, the antigraphs of Mr. Grey, and a variety of other antiquities which were brought to this country, enabled Dr. Young to test the accuracy of his discovery, as well as to modify some of the conclusions at which he had previously arrived; and the result of all his investigations was embodied in the celebrated article on Egypt above mentioned....

Latterly, Dr. Young appears to have, in a great measure, abandoned to others the cultivation of the field which he had

so auspiciously opened up to the curiosity and research of the learned. To what cause this was owing it is impossible for us to say, and we can only express our regret that such should have been the case. The probability seems to be, that enfeebled health, and the first inroads of that fatal disease which ultimately carried him off, at an age when many men are in the full vigor of their strength and faculties, engendered lassitude, and created that tendency to repose, which is the surest symptom that the energies of life have begun to decay. It is not long, we are aware, since he was induced to undertake, or rather to give a conditional promise that he would undertake, a literary task; and we know that his love of learning continued unabated to the last. But the progress of the disease, which at last proved fatal, was too rapid to enable him to execute any thing; while his mind was occupied, and his feelings harassed, by an acrimonious discussion in which, as superintendent of the Nautical Almanac, he unfortunately became involved.

Dr. Young was a man of somewhat peculiar, but not unamiable temper, uniformly manifesting the warmest attachment to his friends, as well as the utmost readiness to promote the interests of all who had any claim upon his good offices. He was liberal and generous, but without the least particle of enthusiasm; extremely sensitive to praise, and not very tolerant of censure; and, in fact, he carried into the world some of the habits and peculiarities of the recluse scholar and man of science. But we must leave it to the pens of those who knew him intimately to do justice to his private character and private worth. It is chiefly in his scientific and literary capacity that we have attempted to estimate his powers and accomplishments; and we think it will be allowed by all candid judges, that, considered in this light, few names are entitled to a higher place in the temple of fame than that of the truly learned and lamented Dr. Thomas Young.

His death took place on the 10th of May, 1829, in Park Square, Regent's Park, at the age of fifty-five. His remains were interred in the cloisters of Westminster Abbey.

Annual Obituary, 1830.

PHYSIOLOGY AS CONNECTED WITH ATMOSPHERICAL INFLUENCE.

BY HARDWICKE SHUTE, M.D.

THE science of physiology comprehends an acquaintance with the natural and healthy actions of a living body, whether animal or vegetable, with their causes and effects, and with the laws, or general principles by which they are regulated, and to which they are subservient.

To know merely that certain actions take place, and lead to certain results, would be not only unsatisfactory to the philosopher, but obviously insufficient for the practical purposes of medicine; and hence it has always been considered an essential part of physiological science, to ascertain, as far as possible, all the circumstances which affect the actions of the body in health. Now of these circumstances there are few which have a greater claim upon our consideration than the acknowledged influence of certain agents external to the body; and of these agents there is not one which exceeds, in the extent or importance of its operation, the atmosphere by which we are surrounded.

But the labor of the physiologist does not terminate here, since he has still to ascertain in what manner such circumstances lead to certain actions, and those actions to peculiar results. Now we are not called upon in the pursuit of this inquiry to reduce the actions of life to the laws of inanimate matter, but to shew how, consistently with the acknowledged peculiarities of life, the causes and effects of the living action can be reconciled. Is it not singular that the physiologist, admitting life to be a power capable of resisting the chemical and physical agency of surrounding bodies, by which the laws of chemical and physical action are suspended, if not subverted, should still persist in the vain endeavour to discover the secret of life in the laboratory of inanimate matter? "If," says Dr. Paris, "life be defined that power by which organized beings are enabled to resist the physical and chemical operations of surrounding bodies, it follows that death must be marked by the occurrence of those phenomena to which the elective attractions, no longer suspended or controlled, will necessarily give rise." Can the occurrence of those phenomena be the dis-

tinguishing mark of death, the proof of living action having ceased, and at the same time be rationally considered as the true explanation of a living action, or the living action itself? If such be the case, the occurrence of those phenomena is regarded as the distinguishing character of life and death equally, or life and death are considered to have no distinguishing character! Is such a proposition, I ask, less embarrassing to the physiologist, less difficult of explanation, than the acknowledged peculiarity of living action? Were it indeed proved that the laws of living and dead matter are the same, the physiological difficulty would be little, if at all, diminished. We should then have to shew how the same agents, acting in the same manner, lead to different results; whereas we are now called upon to reconcile the phenomena of living action with the more simple and intelligible proposition, that the results are different because the agents are employed in a different manner. It might, indeed, easily be shewn that our knowledge of physical, chemical, and vital action is equally imperfect, and that the attempt to reduce the actions of life to the laws of inanimate matter is, in reality, an attempt to render one thing more intelligible, by shewing its correspondence with another equally obscure.

We have said that the physiologist is called upon to reconcile the phenomena of living action with the acknowledged peculiarities of life. Now the word peculiar is, in physiological inquiry, too often considered to imply ignorance; whereas, in fact, it implies a knowledge more or less perfect, of the circumstances in which the peculiarity consists, and by which the actions of living and dead matter are distinguished. The actions of life are peculiar, inasmuch as they differ from those of inanimate matter; but if such peculiarity implies ignorance, it follows that we are unacquainted with all other actions, since they are equally peculiar, as compared with the actions of living matter. What then is the legitimate object of physiological inquiry? By what star shall the physiologist direct his course? "True fortitude of understanding," says Dr. Paley, "consists in not suffering what we know, to be disturbed by what we do not know. If we perceive a useful end, and means adapted to that end, we perceive enough for our

conclusions; if these things are clear, no matter what is obscure; the argument is finished." But the physiologist is often so circumstanced that he cannot establish the fact of the means being adapted to the end without shewing in what manner, consistently with the peculiarities of living action, the end is accomplished by the means employed. How, under such circumstances, can he best avoid the dangerous quicksands of illegitimate theory and extravagant hypothesis? "All attainable science consists in carefully ascertaining nature's own laws, and every attempt to explain an ultimate law of nature, by assigning its cause, is absurd in itself, against the acknowledged laws of judgment, and will most certainly lead to error." Having thus pointed out the course by which alone, in our opinion, the physiologist can rationally expect to arrive at legitimate and satisfactory conclusions, we shall proceed to the more immediate object of the following inquiry—an inquiry into the nature of the connexion which subsists between the actions of living matter, and the influence of atmospherical air, and of that portion of atmospherical air, more particularly, which has been denominated oxygen.

When an animal ceases to breathe, it soon ceases to live. Why? "How would the untutored peasant shake his head at the philosopher who should seem puzzled by a question apparently so plain and obvious, and yet it may be doubted whether the acutest physiologist be yet able to answer it satisfactorily." When an animal ceases to breathe, it soon ceases to live. Why?

"By an easy, natural inspiration," says Dr. Henry, "about 20 cubic inches of atmospherical air are taken into the lungs, and, in the following expiration, the same quantity of air is expired with little, if any, diminution. The quality of the air is, however, materially changed, since it returns charged with 8 or 8½ per cent. of carbonic acid gas, and is found to have lost a corresponding portion of oxygen gas." These effects of respiration are, it must be observed, not at all disturbed by any difference of opinion as to the precise quantity of air taken into the lungs and expired. What has become of the oxygen? how is it employed? how is the carbonic acid generated? what is the nature of the correspond-

ence between the quantity of oxygen lost, and that of the carbonic acid expired? "These," says Dr. Good, "are questions which have occupied the attention of physiologists in almost all ages, and were as eagerly studied in the Greek schools as in our own day. To the present hour, however, they have descended in a mantle of Cimmerian darkness; and though the researches of a more accurate chemistry have disclosed volumes of facts hitherto unknown, and the ingenuity of able theorists has laid hold of them, and applied them to an explanation of this curious subject in a great variety of hypotheses, I am afraid we are still almost as much at sea as ever, and that there is no inquiry in the whole range of physiology in a more unsatisfactory state, than that concerning the ventilation of the blood in the lungs."

It is obviously essential to this inquiry to ascertain, not only the changes in the state of the air inspired, but those which occur in the animal body as the result of the respiratory process. Some of these effects are, we think, clearly developed in the following experiment:—"I confined," says Dr. Goodwyn, "a large living toad on a plate of metal, with its belly upwards; then I removed a part of the sternum, and his heart and his lungs were exposed to view. The lungs were then full of air, the blood in the pulmonary veins was florid, and the heart contracted 44 times in a minute. In this state he was immersed in a small quantity of transparent water, when the alterations in the color of the blood, and in the contractions of the heart, could be accurately distinguished. When he had remained in the water 15 minutes, the blood in the lungs began to put on a dark color, and the contractions of the heart were diminished to 30. In 15 minutes more, the dark color of the blood was increased, and the contractions of the heart were 18. The animal now made several struggles to relieve itself, and threw some air out of its lungs; but the blood becoming still more dark-colored, the contractions of the heart were diminished still further, and in 40 minutes more they ceased, although the sinus venosus and auricle, and the trunk of the vena cava, were filled with black blood. The animal was now removed from the water without any signs of life; but before the expiration

of two minutes, he opened his mouth, and took a large quantity of fresh air into his lungs. Soon after, he emptied them almost entirely, and this was repeated several times. During the process the blood in the pulmonary veins began to be florid, and the heart to renew its contractions, and in 15 minutes from the first inflation, the contractions of the heart were 35, all the functions were recovered, and he walked about without any expressions of uneasiness."

Now we collect from this experiment that the blood, in its passage through the lungs, undergoes a change of color, and acquires, at the same time, the property of contributing in some way to the contraction of the heart, and, if we may be allowed to speak in more general terms, to the contraction of the muscular fibre. The blood, therefore, experiences a change, not only of color, but of animal property, and we are now called upon to reconcile this change with the disappearance of oxygen, and the evolution of carbonic acid, in respiration.

Now the change of color may rationally be considered as an adventitious, and comparatively unimportant circumstance, since ventilation of the blood is equally necessary to *white* and *red-blooded* animals, and equally productive of that change by which the blood, or circulating fluid, is enabled to accomplish its destined functions in the animal body. This change of color was attributed by Lavoisier, Priestley, and others, to the absorption of oxygen, and as the question of absorption seems now to be determined in the affirmative, we can have little hesitation in admitting, that the change of color is, in some way, connected with the disappearance of oxygen in respiration; that the presence of oxygen is essential to that alteration in the state of the blood, by which its florid color is acquired. "We have," says Dr. Bostock, "some very direct and unexceptionable experiments by Dr. Edwards, which may be regarded as proving both the absorption of oxygen, and the exhalation of carbonic acid by the lungs." If the fact of absorption be proved, there seems to be no good reason why we should hesitate to adopt the opinion of those physiologists who consider the absorption of oxygen and the florid color of the blood to be united by the relation of cause and effect, a cause being "that from

whence any thing proceeds, or by virtue of which any thing is done."

The change in the color of the blood has acquired some additional importance from the circumstance of the same, we ought, perhaps, to say a similar, change occurring when dark blood is exposed to the influence of galvanism. "Venous blood," says Mr. Wilkinson, "when exposed to the galvanic process, soon acquires the redness of arterial blood." In the experiments of Mr. Brande, "the blood which surrounded the negative wire was of a deep red color, and extremely alkaline; that surrounding the positive wire was slightly acid, and of a brighter hue." The acidity of the florid blood seems rather to strengthen than invalidate the opinion already expressed, that oxygen is a cause of the florid color; and when we recollect that the presence of oxygen is, under all circumstances, essential to the production of the galvanic power, the experiments cannot, we think, be considered as inimical to the original proposition. The chief interest of the fact seems to consist in the additional circumstance, that galvanism is a power which, like arterial blood, contributes in some way to the contraction of muscular fibre. That oxygen may lead to the change of color through the medium of galvanic agency in respiration, is not improbable, and we have already stated in a previous publication (*vide* Principles of Medical Science and Practice) some of the additional facts which countenance the idea; but it is an idea to which, on the present occasion, we must be considered as attaching little importance, because, supposing the fact to be proved, it would not follow that the laws of galvanic agency are the same in living and dead bodies. The circumstance is now alluded to for the purpose of shewing, that it rather tends to strengthen than invalidate the opinion, that oxygen is a cause of the florid color of the blood, the mode of its action being undetermined.

It has been suggested that the florid color of the blood may be wholly unconnected with the absorption of oxygen, and be owing to "a secretion which is continually taking place on the surface of the lungs." We shall have occasion to advert to this opinion more fully when we come to consider the mode in which the carbonic acid is

generated; but as the opinion professes to be founded upon the fact of oxygen not being absorbed, we might be justified by the experiments before alluded to, and which "are regarded as *proving* both the absorption of oxygen and the exhalation of carbonic acid in the lungs," in rejecting it altogether. We wish it, however, to be understood, that the opinion is rejected only as far as it involves the non-absorption of oxygen, and that we reserve to ourselves the privilege of attributing the florid color of the blood both to the absorption of oxygen and to the secretion which is continually taking place on the surface of the lungs. Having alluded to the galvanic action, as probably connected with the agency of oxygen in respiration, we shall take this opportunity of shewing that the idea is not wholly unsupported by other physiologists. "Mr. Porrett," says Dr. Good, "has shewn that the voltaic fluid, when operating upon water, is capable of carrying even water itself through the bladder, and raising it into a heap against the force of gravitation. A like combination may take place between the voltaic, or some similar fluid, and the oxygen and a part of the nitrogen gases in the air-cells of the lungs, and a similar permeation may follow directly through the membranes of the blood-vessels." There are, we are fully aware, many opinions to which we have not adverted; but we are, it must be observed, not writing a history of physiology, as connected with the agency of oxygen, but stating our reasons for entertaining certain opinions on the subject.

We shall close this part of our inquiry by stating that, in our opinion, the experiments of Lavoisier and Priestley, supported by those of Dr. Edwards, sufficiently establish the fact, that oxygen is absorbed in respiration, and is a cause of the florid color of arterial blood; that the mode of its action is at present undetermined; that the determination of this point is little connected with the general subject of physiology; and that the idea of galvanic agency in respiration, is not undeserving of farther consideration.

ON THE NECESSITY OF PUBLIC
ENCOURAGEMENT TO MEDICAL
STUDENTS.

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*To the Editor of the London Medical
Gazette.*

SIR,

It was one object of an address of mine delivered here on a considerable occasion, and of a letter subsequently published with a similar object, to invite general reflection on the unsatisfactory state in which the study of medicine is placed as to public encouragement in Great Britain; and after insisting on the far greater importance to the community, of excellence in our department of learning than perhaps any other, I ventured to suggest the great advantage that would accrue to society if the government could be induced to place the disposal of a certain number of medical appointments in the naval and military service in the hands of the principal medical schools, to be by them conferred only on extraordinary general attainments, or proofs exhibited of an investigating mind in this important branch of philosophy. I also took the liberty to hint at the valuable influence which the East India direction might so easily exercise over the education of those to whom a future generation is to trust, by the exercise of similar liberality, to say nothing of the immediate advantage that would accrue to their own service, in all its branches, by such a measure. Having continually reflected on this subject, and having felt strongly desirous to present it again and again to the general consideration, with perhaps too sanguine an expectation that it may at last be taken up by persons able to promote it, I was more particularly gratified to learn, (as I had expressly alluded to Mr. Wynne's munificent employment of his patronage in Indian affairs by conferring writerships on superior merit, ascertained by public examination), that the same gentleman has recently extended those liberal sentiments to our profession by conferring some of those medical situations in India, which are known to be such objects of desire to young men, on distinguished students of the London University. It cannot be at all doubtful, that under the influence of such a motive for exertion, that gentleman will soon have the satisfaction of bestowing on our Eastern empire a number of men

of much higher qualifications than could otherwise be counted on:—"Nova rerum nascitur ordo!"

Mr. Wynne's example is not only a beginning, but a great beginning. It is needless to enlarge upon its probable consequences; to a very considerable number of students a high distinction thus won by personal merit, and opening a pathway to fame and fortune, must soon lead to results which it needs no imagination to trace. Even the less fortunate competitors will necessarily form a class of very distinguished students, to whom the line of application so auspiciously begun will be recommended by conscious progress in it; and I cannot hesitate to think that the profession of medicine will, if such rewards be multiplied, probably allure much available talent, at present deterred by the want of any adequate object of ambition. "*Gloria quantalibet quid erit si gloria tantum est,*" will no longer be, as it so frequently has been, the unuttered sentiment of indolent ability. We know, by large experience, what scholarships and exhibitions effect in the Universities.

If these opinions be correct, I trust the government will be induced, at the instance of the heads of our profession, (which surely cannot be withheld), to take up the matter seriously. Perhaps the only effective aid can be given from that quarter; some patronage must be sacrificed, no doubt; but no personal or individual rights will be invaded. As to the public boards, I know no other reason why the dispensation of such favors should not be vested in them as they now stand, except that a distinction conferred by a larger and more important body is in itself a higher distinction. If it be said that a supply of mere competence equal to, or greater than the demand already exists, I reply that this is not in question. A premium for decided superiority is what seems wanting, and is no more than what we find allotted already to almost every sort of excellence except excellence in the medical sciences; in which, however, let it be remembered, that one man of talent and high attainments is at least as certainly *πολλὸν ἀρτιότερος ἄλλων* as in other branches of learning. Supply motive, and any thing can be achieved: the influence of motive is no where so conspicuous as in places of education, where it is addressed to unsophisticated minds; propose only your rewards, and let them be judicious and

attractive, and forthwith "fervet opus!" Inducements to study, we know, cannot be dispensed with; to be, however, effective of a great purpose in such a subject as medical education, and at the age when men devote themselves to it, already looking to consequences, and aspiring after success, I think they must be considerable and worth contending for. Distributions of mere subordinate distinctions, of which the value is perfectly ephemeral and local, will not answer; the object should be such as to send students away, "læti phaleris omnes et torquibus omnes;" but rather "at qui fortis erit, sit felicissimus idem," to call forth the exertion of superior abilities, and thus to legislate at once for the individual, for the profession, and for society.

I have the honor to remain, Sir,

Your obedient servant,

CHARLES BADHAM.

College of Glasgow,
10th Feb. 1830.

DIARRHŒA IN INFANTS.

To the Editor of the London Medical Gazette.

SIR,

I TAKE the liberty of addressing to you a few observations on a troublesome form of diarrhœa which I have several times met with in infants, and which, particularly as regards the treatment, I do not find described by medical writers on their diseases. The diarrhœa I speak of usually occurs soon after the time of weaning, and mostly in children of the scrofulous habit. The stools are not bilious, nor green, and I am at a loss how to characterize them more accurately than by saying that they are semifluid, have a peculiarly ammoniacal, fishy odour, and are very large in proportion to the quantity of food. There is usually great emaciation and languor, some occasional feverishness, and not unfrequently convulsions occur after the disorder has been of some continuance. The abdomen is not hard, nor tender, but generally full. The tongue, if carefully examined, will be found unnaturally red, and often the lips also. The urine is very abundant and pale-colored; and in all the cases of this kind which I have met with, it deposits the ammoniaco-magnesian phosphate, and becomes speedily alkaline and fœtid on standing in a vessel. This condition of the urine I consider

the diagnostic symptom of the disease, which appears to me to be of the same class with the phosphatic diathesis in the adult: and my attention was first particularly drawn to it by my friend Dr. Prout's observations on that affection, in his valuable work on the Diseases of the Urine, &c.

In treating this kind of diarrhœa I find all lowering remedies injurious; such as mercurials, salines, or even the mildest aperients. I do not except those cases in which convulsions occur, as they appear to arise from inanition, and to be invariably rendered worse by depletion.

I recommend animal diet of the solid kind, if the little patient has any teeth, or jellies, strong broths, milk, and eggs, with very little farinaceous food; and conjoin this with the use of the tepid salt-water bath followed by friction, and, as a medicine, the Tinct. Camph. Comp. in doses of $\mathfrak{m}\mathfrak{v}$. or \mathfrak{x} . every night till the bowels are quieted. Should they become costive, an enema of warm water should be administered in preference to aperient medicine, a small dose of which will often induce a relapse.

This description may, perhaps, hardly seem worth a place in your journal, but it has happened to me more than once to see this form of diarrhœa exceedingly obstinate, and the child's state one of great danger under the ordinary modes of treatment, more particularly under the use of mercurials with alkalies, such as the hyd. c. cretâ, calomel with soda, &c. and I conceive this would not be the case were the state of the urine more carefully inquired into and examined.

I am, Sir,

Your most obedient servant,

C. W. CROWDY.

Brixton, Feb. 10, 1830.

SOME ACCOUNT OF A CASE OF FUNGUS HÆMATODES.

BY A. COPLAND HUTCHISON.

EARLY in April 1829, I was consulted by Mr. Lloyd, of Crawford Street, on account of a swelling situated in the course of the right carotid artery, and extending from the clavicle to the margin of the inferior maxillary bone. It had a softish glandular feel to the touch; the covering skin was of its natural hue; there was no increase of heat in the part, nor was respiration or deglutition in the least impaired. He slept well,

and his appetite was good; he complained, however, of an uneasy sensation in the region of the right lobe of the cerebellum.

About fifteen months previously the patient first observed the swelling immediately over the clavicle where the carotid artery emerges from the chest, then about the size of a small hazel nut; it gradually extended upwards and laterally; never had pulsated; and he thought it had been produced by a fit of sneezing, because at the time he felt as if something had snapt. in the part.

Leeches, evaporating lotions, purgatives, and low diet, were first prescribed. Iodine was next employed, both externally and internally, for several weeks, without the least impression being made on the disease. The whole swelling was afterwards covered with the emplastrum ammoniacum cum hydrargyro; but in place of a reduction the tumor continued slowly to enlarge; the skin to become red, (over a part which seemed to point about its lower third), and the uneasiness of the cerebellum to increase a little, but which was never stated to amount to pain. About this period (the end of May) there was a distinct sense of fluctuation all over the tumor, as if fluid of some kind were tightly bound down by the expansion and tension of the platysma myoides, and therefore poultices were applied.

The nature of the tumor was so obscure, and it was altogether of so suspicious a character, that I determined to look into it; and with this view, I judged the safest plan would be to pass a seton through its most prominent part, which I did in the presence of Mr. Jennett, of Gerrard Street, the patient's medical attendant; when, to our surprise, we found the contents to be coagulated venous blood, about two drachms of which were readily removed by the point of the probe, which instrument I passed into the tumor, about four inches, in three different directions, meeting with no obstruction.

Having thus accomplished the object of the operation, I cut the seton close to the escape of the needle, and wholly withdrew it, covering the apertures with sticking plaister, and requesting a consultation, as the case was somewhat new to me. The poultices, which had been applied for some time before, were recommended to be continued by the

two consulting surgeons called in, and the patient's general health was attended to by the administration of quinine.

Soon after this I was superseded by another surgeon, who, after a few visits, pronounced the disease to be aneurism, and said that he intended to perform the usual operation for this disease,—so, indeed, he informed me personally. This gentleman, however, on more mature consideration, abandoned the design, and in his turn was superseded by a third surgeon, who, I am informed, gave it as his opinion that the disease was an enlargement of the thyroid gland.

The patient, now perceiving that all his earthly troubles were near their close, declined seeing any other than his regular medical attendant, who continued to visit him daily until he died in the end of July, having previously requested that the last surgeon but one, with Mr. Jennett and myself, should examine his body after death.

I happened to be in Essex when Mr. Lloyd died, but being anxious about the case, I had taken the precaution to ask an intelligent friend to be present at the post mortem examination, and which, indeed, he himself performed, the former surgeon, though summoned, not having attended. The subjoined is his statement.

I am not aware that any satisfactory account has been published of the cause or origin of the extraordinary disease termed fungus hæmatodes; and therefore I would ask, for the sake of inducing investigation, whether the rupture of a vein, in whatever part, or from whatever cause it may proceed, may not be its true origin? I confess that my opinion leans strongly that way.

Duchess Street, Portland Place,
15th Feb. 1880,

Account of the Post-mortem Examination.

Dear Sir,—According to your request, I send you an account of the post-mortem examination of your late patient, in Crawford-Street, at which Mr. Jennett and Mr. Streeter were present.

The whole of the right side of the neck is covered by a large tumor, which extends from the base of the lower jaw downwards to the clavicle, backwards to the edge of the trapezius muscle, and forwards to the trachea, extending

a little to the left side, in the situation of the thyroid gland. The most prominent part of the tumor, of the size of the palm of the hand, is in a highly putrid and doughy state, and has the color and consistence of coffee grounds; the surrounding skin is much thickened and puckered at its edges. From the soft condition of the tumor, from its having no distinct cyst, and also from the disappearance and displacement of muscles, some difficulty was experienced in observing its precise connexions. It was found to be slightly connected with the sheath of the larger vessels of the neck; the trachea and œsophagus were pushed to the left side; a small portion of the platysma myoides, and about an inch of the superior and inferior parts of the sterno-cleido-mastoideus, were the only evident remains of these muscles on the right side; they were coated with lymph, but had no appearance of being converted into the same kind of substance as the tumor. The pleura had been pressed considerably downwards into the chest, forming the inferior boundary of the morbid growth, and the submaxillary gland, of a healthy structure, was much compressed by its superior portion. The whole chain of glands, both superficial and deep-seated, on the right side of the neck, as also the thyroid, appeared to have been converted into a mass of disease of the true fungoid character, forming the fungus hæmatoides of most English authors, the encephaloid tumor of the French, and the medullary sarcoma of Mr. Abernethy; each name being more or less applicable, according to the peculiarity of the various shades of morbid actions set up in this most uncontrollable disease. Fungus encephaloides certainly gives the best idea of that I am describing, as it exactly resembled brain which had been for some days in a state of decomposition; some parts were of a reddish, others of a yellowish-brown color, and the whole was soft and pulpy. The left lobe of the thyroid was firmer, and had more of its usual appearance than the other portions of the gland, being probably the last spot to which the medullary action had extended, as it was here evidently in a very early stage. About a pint of bloody serum was observed in the right thoracic cavity, and the plura pulmonalis on this side was partially coated with lymph, and shreds of lymph were floating in the serum; the lungs were of a

very healthy structure, as were the other thoracic and all the abdominal viscera. The brain was not examined, its functions having been perfect nearly to the last; the heart was empty, with the exception of the left auricle, which contained a small quantity of coagula.

(Signed) R. WADE.

68, Dean-Street, Soho,
Aug. 6th, 1829.

MEDICAL GAZETTE.

Saturday, February 20, 1830.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tuæ; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

REMUNERATION OF GENERAL PRACTITIONERS.

IN another part of the present number our readers will find some account of a meeting at Leamington, on the subject of the late trial—HANDEY v. HENSON; and they were made aware, by a notice which we inserted last week, that it is intended by some gentlemen in the metropolis to give a dinner to Mr. Handey on the 2d of next month.

When on a former occasion we alluded to this subject, we expressed in the strongest terms our opinion that it was an event likely to prove highly advantageous to the general practitioner, and calculated to raise the character and respectability of the whole profession. The situation of a man who is legally warranted in charging for his visits, is very different from that of one who has no method of obtaining a fair recompense for his professional skill except through the medium of an extra supply of draughts. But while we fully agree with those who go farthest in estimating the importance of this decision, we differ essentially from those who have called the meetings above alluded to, as to the best mode of turning it to account. To us it appears injudicious on the part

of the general practitioner to fix public attention too much upon the subject, especially in the manner proposed, and least of all should any thing like *triumph* be allowed to appear. Triumph is a rejoicing in victory, and victory implies that some party has been defeated. The medical profession are the victors; the vanquished are the public. Now, although this be true, it is to the latter an unpalatable truth, and one which ought not to be too much insisted on. In fact, it is the interest of general practitioners, as a body, to bring the new powers they have obtained into operation as silently as possible; not with any fanfaronade calculated to arouse the dormant fears of the public, by which the victory may after all be rendered abortive. That this is the view taken of the subject by some of the most intelligent and influential general practitioners in the metropolis, we know, and we recommend it to the serious consideration of those concerned. Every thing tending to advance the solid interests of any part of the profession shall always have our warmest support. This decision, by enabling the apothecary to charge both for his time and his medicines, is undoubtedly a great and important advantage, and as such we announced it. But to make this an occasion of public triumph, and to get up a dinner at the Freemason's Tavern to celebrate it, can serve no purpose except that of putting money into Mr. Cuff's pocket, and keeping it out of the pockets of those who go there; for John Bull, who already views the decision as an advantage gained over him by the general practitioner, will be induced by all this appearance of exultation to think twice before he either swallows his physic, or takes his advice.

ANATOMICAL WAX MODELS.

THE Duke of Northumberland's recent donation of five hundred pounds to the College of Surgeons in Ireland, was presented as a token of his Excellency's approbation and esteem, with a suggestion that the purchase of a series of anatomical figures in wax might perhaps be the most proper mode in which it could be expended. It is the intention of the College, we understand, to give ample effect to the proposed measure; they will add five hundred or a thousand pounds more to the Duke's donation, and have determined on dispatching their ingenious curator, Mr. Houston, to Paris, and to Vienna and Florence, if necessary, in order to purchase a collection of preparations in wax, which are to be set apart as the "Northumberland Museum."

We know not that his Excellency's suggestion is a bad one; on the contrary, we have often thought that the art of modelling in wax might, if properly encouraged, be turned to good account in the service of anatomy and of pathological science. Were we to form an opinion, however, merely from the very imperfect, shewy, and overdone specimens hitherto exhibited in this country, it would seem extremely questionable whether it were prudent to expend large sums in the purchase of such articles. But the truth is, we have not the real art among us. It is not so with our imitative neighbours. Every curious and scientific visitor of the French metropolis must have seen the admirable collection of M. Dupont*, in the Rue du Coq. St. Honoré; he who has not, can scarcely feel his loss. The other museums of Paris also contain many fine specimens of wax models, illustrative of medical science; but we refer to M. Dupont's the more particularly as.

* We have lately heard of the death of this celebrated artist.

being, in the estimation of some of the ablest judges, the best calculated to impress the spectator with the value and importance of this branch of the fine arts. No preparation, wet or dry; no engraving, lithograph, or drawing, could compare with his splendid specimen of the great sympathetic, for vividness and accuracy; then the facial nerve in the same collection; the preparations of the ear, and of the diseases of the eye; the venereal and cancerous representations really (to borrow the French phrase) "left nothing to desire."

For ornamental purposes, wax works have been long employed, as well as for the structure of objects of terror and devotion; but their application to the advancement of medical science is not to be referred to a very distant date. One Zumbo, a Sicilian artist, some of whose works are still preserved in the great museum of Florence, was the first who distinguished himself in this way*. There is in the museum of Trinity College, Dublin, a large collection of models in wax, anatomical and obstetrical, the work of a M. de Roue; they were executed in Paris about the middle of the last century, purchased at a vast expense by the Earl of Shelburne, and presented by him to Dublin College. They are now preserved, of course, merely as objects of curiosity; but they serve admirably to shew the advances which have been made in practical anatomy since the date of their construction, or rather within the last twenty or five and twenty years; for we have been credibly informed that the predecessor of the present professor of anatomy in

Dublin used to demonstrate the nervous system on them.

Now that the art of modelling in wax has been brought to such perfection for general purposes, and is known to be capable of so much excellence, would it not be prudent and praiseworthy to encourage our native artists to rival their brethren of France? Next to the actual specimens of healthy and diseased structure, there are no such examples to be had as those in finished wax-work. The painted plaster casts, which begin to fill so large a space in our collections, though in many respects highly valuable, are vastly inferior, both in delicacy of tint and detail, to those beautiful waxen fac-similes of nature.

GALVANIC EXPERIMENTS.

A SERIES of experiments were lately performed in the theatre of the College of Surgeons in Ireland on the bodies of Byrne and Mellon, who were executed for murder. A battery of 220 four-inch plates was employed on the occasion. Before the arrival of the bodies from Newgate, one of the professors explained the nature of the experiments about to be performed. The first object was to determine whether the function of respiration could be renewed by galvanic agency, aided by artificial inflation; the next to exhibit the contractions of the voluntary muscles, and to ascertain whether statements made by previous observers were to be implicitly relied on. Mr. Bell's views on the nervous system were also, if possible, to be submitted to the test of experimental proof; and, finally, it was proposed to examine, with as much accuracy as possible, the phenomena exhibited by the iris when placed in the course of the galvanic circuit. It was thus hoped to verify the conclusion drawn from similar experiments made on the two individuals formerly executed for the murder of Hanlon.

The bodies arrived late at the College; it was, in fact, within a few minutes of three o'clock. Their temperature was found to have been considerably reduced below the standard of life; and hence

* Forsyth, in his work on Italy, describing the museum of Florence, says, "Wax was first used in imitating anatomy by Zumbo, a Sicilian, of a melancholy mysterious cast, some of whose works are preserved here. Three of them have the gloomy character of the artist, who has exhibited the horrible details of the plague and the charnel house, including the decomposition through every stage of putrefaction; the blackening, the swelling, and the bursting of the trunk; the worm, the rat, and the tarantula at work; and the mushroom springing fresh in the midst of corruption."

little hope could be entertained of re-establishing the functions of circulation and respiration. One of them, however, was carried into the theatre, and the nerves alluded to exposed by the demonstrators. The galvanic current passed along the phrenic nerve to the diaphragm produced no apparent effect on that muscle, nor was there any tendency to the renewal of respiration, although the electrical stimulus was aided by artificial inflation of the lungs. The various muscles of voluntary motion were convulsed by the current, although not to such a degree as to verify the statements made by previous experimenters. The experiments in reference to Mr. Bell's views were unsatisfactory; from the impossibility, under the circumstances, of insulating the particular nerves so as to transmit through them exclusively the galvanic current. Different experiments were performed on the iris, all of which concurred in shewing that the diameter of the pupil was diminished upon submitting it to the influence of the pile, and it is to be observed that the diminution of the pupil took place indifferently to whatever part of the iris the stimulus was applied; whereas, on the former occasion, the pupil was enlarged when the needle was inserted towards the circumference of the iris.

The second subject was next introduced, and the diaphragm, abdominal viscera, and heart, successively submitted to the galvanic agency. The diaphragm did not betray the slightest tendency to contract; and the intestines appeared equally destitute of irritability. The right auricle of the heart, however, manifested a decided contraction. And so ended the exhibition, without adding any fact of importance to our previous stores.

HUNTERIAN ORATION.

We regret that, owing to our reporter having arrived at the College *three minutes* after the time mentioned on the card, he was excluded. Ought not a few minutes' grace to be allowed? the rather as the clocks vary considerably in different parts of the town; and this circumstance led to many gentlemen being disappointed. We have heard the oration very favorably spoken of.

DEATH OF DR. GOOCH.

It is with very sincere regret that we have to announce the death of Dr. Gooch, which took place on Tuesday last, at his house in Berners-Street. On a future occasion we shall give a more extended notice of this accomplished physician.

ROYAL INSTITUTION.

Friday, Feb. 12, 1830.

Electro-Dynamics.

UNDER this title, Mr. Ritchie submitted to the members and their friends, at the conversazione held this evening, a philosophical digest of the recent discoveries which so closely established the connexion between magnetism, galvanism, and common electricity [which, by the way, for the sake of euphony, we should like to call *electrism*, as then the familiar word *electricity* might be used as a generic term, including the several species denoted by their ultimates in "ism"]. His experiments were numerous and conclusive; such as rendering hard and soft iron, steel, &c. magnetic by position, as well as by electrism, and by making it a part of the galvanic circle. Many magnetic poles were also, by similar means, given to the same small metallic rod, according to the number and direction of the coils of wire with which it was surrounded, so that it attracted and repelled the needle at several alternate points of its extent. He contended, if we understood him rightly, "that the copper end of the voltaic pile is the positive, and the zinc the negative extreme; that the double plates at either end, which have caused the misconception, are useless, so that what is usually considered the zinc extreme is in truth the copper, *et vice versa*."

He alluded to a new electrometer which he had constructed, so much more delicate than Bennett's gold leaf one, that it would indicate perceptibly the *smallest possible* portion of electricity. As a proof of this, he stated, that a fling of zinc and another of copper, each weighing but a single grain, and floated upon water, would indicate by several degrees on a scale the electricity generated by their contact.

These observations were concluded by adverting to the proposition of M. Amperes, of applying the magnetic influence to the purposes of a telegraph; for, by having thick copper wires laid from one town to another, magnetic needles being attached thereto, each bearing a letter, it was argued that the position given to one in London would influence the corresponding needle in Edinburgh; so that, as Mr. R. observed, the Times newspaper might be printing in the "modern Athens," at the very same moment that the type is leaving the compositor's hands in "Babylon the Great."

When our towns are illuminated by electric sparks, and gasometers give way to voltaic batteries or electrical machines, we have no doubt that a man will be able to talk in St. Stephen's Chapel with his mouth, in Glasgow with his right hand, and in Dublin with his left—putting out of the question his two feet, which may hold communion with the Antipodes, or Canada, and "the farthest Ind." These amusing speculations relieve the severer points of study; and this attempt to "vulgarise ubiquity," is, in our opinion, a pretty philosophical toy, well adapted to illustrate the subject treated of—"Electrodynamics;" and—nothing more.

On the table in the Library we observed, along with several models and works of art, a magnificent specimen of native platinum, weighing about half a pound; the largest native mass we ever saw; its usual state being that of small sand-like grains.

HANDEY v. HENSON.

To the Editor of the London Medical Gazette.

Leamington Spa, 13th Feb. 1830.

SIR,

I HAVE been requested by the gentlemen composing the meeting, (an account of which accompanies this note), to beg you will have the goodness to notice the same in your columns.

I have the honor to be,

Your very obedient servant,

CHARLES LOUDON.

At a public meeting of the medical

profession, held at Leamington Spa, on Wednesday the 10th February, 1830, Dr. London in the chair, it was proposed by Edward Goate, Esq. of Keneton, and seconded by J. M. Cottle, Esq. of Leamington—

That the thanks of the medical profession are due to James Handy, Esq. of London, for his exertions in obtaining the decision, whereby the practitioner is entitled to be remunerated for his skill and time as well as for his medicines.

Proposed, by Richard Jones, Esq. of Leamington, and seconded by Edward Welchman, of Kineton—

That a subscription of 2s. 6d. from each practitioner be raised immediately for the purpose of presenting Mr. Handy with a piece of plate; and that the profession in London, and throughout the country, be invited to join the same.

Proposed, by J. Gardner, Esq. of Southam, and seconded by Wright Laxton, Esq. of Southam—

That these resolutions be transmitted to the editors of the two London weekly medical journals; and that the editors of the other medical journals be also solicited to copy the same.

CHARLES LOUDON, Chairman.

Dr. London having left the chair, the thanks of the meeting were voted to him for his conduct on this occasion.

W. L. SMITH, Secretary.

HOSPITAL REPORTS.

GLASGOW EYE INFIRMARY.

Puromucous Ophthalmia.

Treated by MR. MACKENZIE and MR. RAINY.

THE students of this Infirmary have had ample opportunity lately of observing the progress and treatment of that formidable disease the Egyptian ophthalmia, which, during the autumn months, was more prevalent than usual. From the first case may be seen the obstinacy with which it will sometimes, for a while, resist the most attentive and judicious treatment. The second case illustrates the rapidity with which, when neglected, it goes on to destroy vision; while the third and fifth shew with what facility

it may often be checked, when properly treated, in the earliest stage.

Glasgow, Jan. 17th, 1880.

CASE I.—Geo. Dacherty, æt. 4, Sept. 6th. Ophthalmia puro-mucosa contagiosa, principally affecting the right eye, the conjunctiva of which is much chemosed, and secreting purulent matter. Symptoms of eight days' standing.

Scarificet. facies interna palp. infer. dextræ.
Gutta Sol. Nitratis Argenti (gr. iv. ad 3j.)

Aqua tepida pro collyrio.

Unguentum præc. rubri ad margines palp.

R Calomel, gr. iij. Pulv. Jalap, gr. x. M. cap. statim.

9th.—Has not attended. There is a small speck on the centre of right cornea. The cornea is nebulous. Chemosis still excessive.

Coll. Muriatis Hydrargyri.

Rep. scarificatio.

R Tart. Antim. gr. ij.

Sacch. Albi, 3j. M. opt. divide in pulveres, iij. Cap. indies.

10th.—Cornea more nebulous.

Rep. Scarificatio.

Rep. Tart. Ant. gr. ij. tribus vicibus Vesicatorium ad nucham.

11th.—No vomiting or purging.

Rep. pulvis purgans.

12th.—Powder operated well; symptoms abated. A depressed line was visible yesterday, parallel to, and about one-tenth of an inch from, the lower edge of the cornea; it is still visible, but does not seem so opaque.

13th.—Since yesterday, the left conjunctiva is much chemosed, and secreting puriform matter.

R Tart. Antim. gr. ij.

Sulph. Magn. 3j.

Aquæ, lbj. solve et cap. cochleare magnum 2nda q. q. hora.

14th.—The depressed line near the lower edge of right cornea appears to-day in a state of ulceration. Inflammation of right conjunctiva abated; left conjunctiva secreting a large quantity of thin yellowish matter, and left eye-lids much swollen. One stool yesterday evening. Has taken about a third of the solution.

Hirud. vi. ad palp. super. sing.

15th.—Chemosis continues.

Abradantur capilli capitis et adhibeatur vesicatorium vertici. Scarificatio palpebrarum.

19th.—Ulcerated part of right cornea smoother and clearer, but still depressed. Left sclerotic beginning to appear around the cornea. Still a considerable discharge of puriform fluid from each conjunctiva.

20th.—Right cornea improves.

Rep. Hirudines ad palpebras.

21st.—Injiceatur supra conjunctivas solutio sulphatis cupri. (Sulph. Cupri, gr. iv. Aquæ, 3j.)

22d.—Chemosis and secretion of pus seem to be abated; left cornea continues perfectly well, and the right still improves.

R Sulphatis Quinæ, gr. xii.

Calomelanos, gr. vi

Sacch. Alb. 3j. M. divide in Pulv. xii. cap. i. terind.

25th.—Sol. Nitratis Arg. et Sol. Sulph. Cupri alternis diebus.

28th.—Chemosis still very great, but rather paler.

Hirudines, ij. ad faciem internam palpebr. infer. singularum.

29th.—Gtt. Vini Opii vice Sol. Nit. Arg. et Sulph. Cupri.

Oct. 2.—Rep. Hirud. ad Palpebras.

Rep. vesicatorium.

4th.—Cataplasmata Acetitis Plumbi super oculos per noctem.

Rep. Scarificatio palp. infer.

5th.—Scarificatio palp. super.

6th.—Vesicatoria pone aures et postea unguent. Cantharidis.

Sol. Nit. Arg. (gr. iv.) vice Vin. Opii.

8th.—Conjunctivæ rather less fleshy, and something smoother; blisters discharge well.

12th.—Sulph. Cupri solid. et sol. nit. arg. ad faciem interv. palp. alternis diebus.

15th.—Internal swelling of lids, and sarcomatous state of conjunctivæ subsiding.

17th.—Conjunctivæ considerably fallen, and much smoother.

18th.—Improves.

20th.—Symptoms diminish daily, but has not yet opened the eyes.

25th.—Opens the eyes. Says he does not see. Iris and pupil of each eye appear perfect. Conjunctiva smooth, and very little swollen.

26th.—Opens eyes well, and sees.

29th.—Conjunctiva continues smooth, but still red.

Omit. Pulveres. Cont. Sulphas Cupri, &c.

30th.—All but well.

CASE II.—Robert Elder, æt. 12, Sept. 23. Severe puro-mucous ophthalmia of a fortnight's standing. An ulcer penetrating through the centre of right cornea. Right pupil protracted, and a small portion of iris protruding. There is also a penetrating ulcer near the centre of left cornea, with a portion of the nasal edge of the pupil protruding. The left pupil is still of considerable size. Is restless during the night. The right eye is very intolerant of light. Conjunctiva red and swollen. Distinct secretion of puriform matter. Says a number

of his neighbours have similar complaints of the eyes. Appears to have suffered formerly from an attack of strumous ophthalmia.

Gtt. Sol. Nit. Arg.
Unguentum Præc. Rubri.
Coll. Murat. Hydr.

R Sulph. Quinæ, gr. xii.
Calomelanos, gr. vi.
Sacch. Alb. 3j. M. opt. divide in pulv.
xii. Sum. i. ter indies.
Belladonna ad Palpebras.

24th.—A better night. Right pupil a little enlarged. The protrusions of the iris not diminished.

Cont. Remed.

26th.—Left pupil considerably dilated. Eyes much easier.

30th.—Both pupils larger.

Oct. 8th.—Inflammation abates.

There was no recurrence of inflammation, but the vision was considerably impaired.

CASE III.—Anne Lesley, æt. 50, Oct. 30th. A smart attack of puro-mucous conjunctivitis of right eye. Much pain of eye and across the forehead. As she was attending the Infirmary at the time, with a child, the affection was immediately noticed.

R Tart. Antim. gr. j.
Sulph. Magn. 3j. solve.
Cap. part. vicibus.
Hirudin. viii. circum. ocul. dext.
Sol. Nit. Arg.
Ung. Præc. Rubri.
Aqua tepida pro coll. ter indies.

31st.—She is reported much relieved, and the attack went off without farther trouble.

CASE IV.—S. O'Neil, a girl, æt. 6, Sept. 5th.—Ophthalmia puro-mucosa contagiosa of left eye, of five days' duration. Eyelids much swollen, and of a dark red color; profuse puriform discharge, and considerable chemosis. About the same time as the attack of ophthalmia, the mother observed a puro-mucous discharge from the vagina. Of the origin of this the mother could give no account. The circumstance is rather curious, as in all probability the vagina had been infected by matter from the eyes.

Scarificatio.
Gtt. Sol. Nit. Argenti.
Coll. Muriat. Hydrar.
Ung. Præc. Rubri.

The attack in this instance proved very severe, and the eye was repeatedly in great danger of being lost. The vaginal discharge continued. The treatment was similar to that of the former cases. Scarifications, leeches, calomel and opium, quina, solution of nitrate of silver, sulphate of copper, &c. were all in their turns employed.

At length the symptoms began to yield about the middle of October, the child

opened her eyes, and vision was still safe; when the mother became negligent, and then ceased to attend altogether.

CASE V.—M. M'Donald, æt. 5, Sept. 1st. Severe puro-mucous ophthalmia of right eye, with chemosis, since 27th of August. Left eye became similarly affected yesterday. The attack began with sickness and vomiting on the 26th. Bowels bound.

Scarificatio.

R Calom. gr. ij. Jalap. gr. x. Cap. gr. ss.
Sol. Nit. Arg.
Ung. Præc. Rubri.
Coll. Muriat. Hydr.

4th.—Symptoms abate. She continued to do well, and was dismissed cured on the 24th.

ST. THOMAS'S HOSPITAL.

Case of soft Cataract, with adhesion of the Capsule of the Crystalline Lens to the posterior part of the Cornea.

MR. TRAVERS performed the operation of solution in a case of capsulo-lenticular cataract on Thursday, January 21st. In this case the lens was converted into a soft mother-of-pearly whiteness, and had become so enlarged, and protruded forwards, that the capsule of the lens was found adherent to the posterior part of the cornea; which attachment was separated at the time of the operation. The operator was heard to observe that he had never seen a case of the kind before, where such adhesion had taken place.

The original cause of the complaint was a blow on the organ with a stone, producing a considerable degree of inflammation: this happened about three months ago, and for which he was treated by a country practitioner. The patient, who is about 27 years of age, states, that from the time he received the injury until the past week, he has only been able to perceive a faint glimmering of light; he can now, however, discern objects at a little distance with some precision, and in a weak light is able to distinguish the panes in the window half the length of the ward. The treatment adopted since the operation is the extract of belladonna, applied around the eye upon the lids; bowels kept open with house physic; and one grain of calomel, with five of Dover's powder, taken twice a-day.

Two Cases of Lithotomy.

On Friday, Feb. 5th, Mr. Tyrrell operated on two patients for stone in the bladder: the first was performed on a man, 63 years of age; and the other on a child, 5 years old. From the former a large calculus was re-

moved, weighing upwards of two ounces, and of a flat pebble-shape. That from the latter was of an oval form, about the dimensions of a common-sized walnut. In this case the operator made use of a probe-pointed knife for making the section into the bladder. In the case of the old man, a longer time was required for the extraction of the stone, by allowing the parts through which it had to pass gradually to dilate; for on account of its size and shape, it was not easily removed without such extension of the wound, although the forceps had grasped it favorably. After the patients were removed to their beds, warm chamomile bags were kept applied, for a considerable time, over the abdomen of each; and renewed about every-quarter of an hour, according to the usual practice of this hospital.

Feb. 9th.—Having visited the patients daily, we have to give a favorable report of both cases. The urine still comes away partly by the wounds, and in part by the right passages; the bowels are kept open with house medicine and castor oil. To the child, however, a common enema is occasionally administered.

Feb. 15th.—Both doing well.

GUY'S HOSPITAL.

Lithotomy.—Removal of two Calculi; one from the Perineum, and one from the Bladder.

A **fine** healthy-looking boy, seven years of age, was brought upon the table, to undergo the operation of lithotomy, Jan. 14th; but we cannot assert as to whether any doubt was entertained with respect to the exact nature of the case—repeated soundings were made by the surgeons, Messrs. Key, Morgan, and Bransby Cooper, as if to make certain its true state. Sir Astley, likewise, having entered the theatre just at this time, was requested by Mr. Key to sound the boy, when after a few minutes examination, he stated that he felt a calculus situated in the passage, a little anterior to the neck of the bladder. This being afterwards confirmed by the other surgeons, the patient was bound in the manner usual for lithotomy, and the operation proceeded with as follows:—

Operation.—The straight staff, which was made use of for sounding, was held in the accustomed position by an assistant. The operator, Mr. Key, then commenced his first incision on the left side of the raphe of the perineum, and extending it downwards and outwards to midway between the anus and tuberosity of the ischium, dividing the integuments and fascia; several small incisions were then made, the fore-finger of the left hand being introduced into the wound, to direct the course of the knife upon the calculus, which was lodged in the urethra: this being done,

a pair of forceps was introduced into the wound, and a small stone removed, weighing about two scruples. Mr. Key now laid hold of the staff, and having ascertained that there was also a stone in the bladder, continued with the operation for its extraction, for which purpose he passed his fore-finger into the wound, and feeling the staff which was again held by the assistant, introduced the knife, and fixed its point in the groove; then taking hold of the handle of the staff, and gently depressing the handle, carried the knife at the same time forwards into the bladder. Afterwards, by the assistance of a pair of forceps, two large portions of calculus were removed, which, when joined together, formed a stone about an inch and a half long, and nearly half an inch in thickness. The patient was now unbound and removed from the theatre. Mr. Key then turned round to the pupils, and explained the nature of the case; the purport of which was, that a piece of calculus had found its way into the urethra, and ulcerating through, lodged itself in the cellular membrane of the perineum, where a sac had been formed around it. "Having removed this, said he, and finding, on sounding the patient again, that there was a stone also in the bladder, I proceeded with the operation, and removed this large calculus (holding up the two portions to the pupils) which was situated at its fundus, inclosed between folds of the mucous membrane."

This boy has been operated on thrice for stone; the two preceding operations were performed by a surgeon in Essex, the first about five years ago, and the second five weeks previous to the one by Mr. Key.

The boy has done well.

BOOKS RECEIVED FOR REVIEW.

A Popular Summary of Vaccination. By John Marshall, Esq.

A New System of Treating the Human Teeth. 2d Edit. By J. Paterson Clarke, M.A. Dentist.

A Manual of the Economy of the Human Body in Health and Disease.

Observations and Cases relative to Dislocations of the Shoulder Joint, with a Variety of Methods for Reduction. By R. Roberts.

Illustrations of some of the Principal Diseases of the Ovaria, their Symptoms and Treatment. By Edw. J. Seymour, M.D.

ERRATA.

In our last number, p. 632, col. 2, line 20, for "uncommon," read "unknown."

P. 632, col. 1, line 2 from bottom, for "plurimes," read "plurimas."

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SATURDAY, FEBRUARY 27, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

BY WILLIAM LAWRENCE, F.R.S.

LECTURE XXII.

Scrofula. continued.—Comparative effects of residence in Town and Country.—Gout and Rheumatism.—Gouty affections of the Eye.

I SPOKE to you, gentlemen, in my last lecture of the employment of tonics in the treatment of scrofula, and I mentioned to you the reasons why I consider the use of them objectionable generally, but I stated that under certain circumstances they are allowable, and even advantageous. I might have added, that in a great number of scrofulous subjects tonics are altogether inadmissible. There are many individuals laboring under affections of this character who will not bear them in any shape at all, and seem to be rendered worse by the use of tonics, under whatever form or circumstances they may be employed.

I should also have spoken to you in my last lecture of the importance in cases of scrofula of residence in pure air; in fact, this alone, in many instances, is capable of doing more towards mending the state of the system on which such scrofulous disease depends than any thing we can do, either by external applications or internal remedies. It is in vain, in fact, in many cases, to attempt to relieve diseases of this kind while the patients remain in large towns, in crowded dwellings, and in confined situations; but as soon as they cease to do this, and get into pure country air, the diseases which we had been attempting to remedy, but ineffectually, will get well of themselves. This kind of benefit is more particularly seen in inhabitants of large towns who have removed to the sea-side; and thus it is popularly known that the air of the sea side is of great advantage in the

treatment of this complaint. We are not, however, to suppose that the sea-side air has a specific influence over scrofula: it has not. Scrofulous disease will arise in individuals who were born and have always lived in such situations; nevertheless, the advantages of the change to those who have lived in large towns, more particularly the peculiar tonic or bracing effects of the sea-air, produce so great and beneficial a change that in many instances the worst forms of scrofulous disease experience very marked benefit, and get well rapidly, simply by the change of air, without being accompanied by internal medicines or external applications.

There is an infirmary established at Margate for the reception of scrofulous patients during a certain part of the year, in order to give to poor persons the advantage that may be derived from that source, and the general practice is to apply nothing in the shape of external remedies to such subjects except cloths dipped in the salt water; but we cannot ascribe great virtues to these as local applications.

I have sometimes been surprised at finding even medical persons inclined to question the advantages that are to be derived from pure air, either in scrofula or cases of other descriptions. The benefits seem to me to be so great and unequivocal that I am at a loss to understand on what ground there can be a doubt entertained on the subject. But I have sometimes heard it stated in explanation of this doubt that the air, when analyzed chemically, presents the same elements in all the varieties of situation. This of course will be readily admitted, but probably there is something besides the mere properties of element and atmosphere capable of acting favorably or unfavorably on human health. I can only say, that after being some time in London, and passing only twenty-four hours in the country, it makes me feel so different—I feel so manifest an accession of health, that I cannot doubt the effect; and as I have often opportunities of seeing the advantages arising from pure air in patients laboring

under considerable diseases, I have no hesitation in ascribing great efficacy to it.

Some time ago I had an opportunity of seeing, in a family that I am acquainted with, the marked effects produced by change of air, and the circumstances of the case were such as to induce me to mention it to you particularly. The family consisted of a gentleman and his wife, both of whom were elderly persons, and about nine or ten children, who had lived for a great number of years in the neighbourhood of London, towards the northern part, but not in town, and both themselves and their offspring had had invariably good health. There were those marks about the children that would lead you to suppose that they were rather of strumous constitution, yet they suffered no decided form of strumous disease; and I believe, though the family consisted altogether of about eleven individuals, they contributed very little to the support of our profession. The eldest son had all the marks of a strumous affection of the glands of the neck, and when he got older he contracted the venereal disease, and had a bubo. This was very troublesome, and just enough to make the constitutional disposition of the family known. It happened that circumstances connected with the professional pursuits of the parent induced him to leave that situation, and take up his residence in London, in a close and confined part of the town. Within two years a marked change took place in the health of his family. In the first place a young child died at the age of about three years; it had been previously healthy, but became ill soon after the father removed; it had strumous ophthalmia, and a tumor of the lower eye-lid, with a formation of abscess in the lid; it had an undefined kind of indisposition, that sometimes affected the head, sometimes the chest, and sometimes the abdomen, and at last it died with symptoms of a severe attack in the chest. On examining the body I found excessive ulceration of the mucous membrane, and a considerable enlargement of the mesenteric glands, with tubercular disease of the lungs. Another infant died at the age of six months. The eldest daughter of the family, a remarkably fine beautiful young woman, at the age of seventeen, began soon after the family removed to town to have uneasy sensations about the chest, then an attack of inflammation took place, and this ended in consumption, of which she died. The father, a person who had enjoyed good health, and who lived regularly, had a severe attack, of an inflammatory character, in the bowels. All this took place within two years in the same family, while, in the whole preceding period of their residence in the neighbourhood of London, during which they had nine children, nothing of the same kind took place. This gave a warning

so impressive that the parents could not but observe it, and they determined upon going out of town again.

Gout and Rheumatism.

Gout and *rheumatism* belong to medical rather than to surgical courses of lectures; however, as the morbid states which are designated by these terms are chiefly known to us by producing local disease, and as in our capacity of surgeon we often have to treat cases in which the disease is considered of a gouty or rheumatic nature, we cannot properly and entirely omit the subject in a surgical course of lectures. We are naturally led to enquire what is the real nature of the disease in those cases which are called gouty and rheumatic? Whether the inflammation of the joints, particularly of the fibrous and synovial structure of the joints, to which the name gouty and rheumatic inflammation is given, whether this be essentially different from the common diseases of the joints? Whether the treatment be the same in the two cases? Whether persons of gouty or rheumatic constitutions be liable to the consequences of that peculiar inflammation in other parts of the body as well as in the joints? These are questions of consequence that naturally occur to us, so that the subject perhaps will be best elucidated if we take up the consideration of some part which may be liable to the different varieties of disease—the joints of the body, for example.

The knee may be the seat of common inflammation, or it may be the seat of that kind of affection which is denominated gouty or rheumatic inflammation. Under all three of these circumstances—that is, whether the joint be the seat of common, or gouty, or rheumatic inflammation, we find that its function is suspended; that the motions of the part are impaired; that it is more or less painful; and it is usually in some degree red and hot. These are circumstances which are common to the affection in all the three instances. There may be a difference in the degree of these symptoms, but such differences are not very constant; at all events they are only differences that consist in modification, or form, and are not essential differences in nature. Indeed, we may assert, that if we look to the local symptoms generally, we shall not be able to establish the diagnosis; we shall not be able, by referring to the local symptoms, where there is swelling of the knee, to tell whether it is common inflammation, or gouty, or rheumatic inflammation; yet when we come to survey all the circumstances belonging to the case, we find immediately that there is a difference in the progress, and in the treatment of the affection in the three instances.

Common inflammation is produced by mechanical injury of the joints, and this acts on individuals under all circumstances;

whatever may be the age, or other condition of the individual, a mechanical injury, to a certain amount, will produce inflammation in the articulation. In rheumatism we see that the affection is produced by the action of cold immediately on the part itself, or on some other part of the body, or by some other external influence; but that these external agencies do not produce the affection invariably in all individuals; they only produce it in certain cases. Cold, or other external agency, may be applied to a great number of individuals, but it will only produce a rheumatic affection of the joints in some proportion of those persons. You require, therefore, for the production of rheumatism, the application of some external agency; and, at the same time, a particular constitution, having a disposition to the complaint. In gout we see the affection arising without the application of any external cause at all; in fact, gouty inflammation will come on in a joint, and frequently does so in the middle of the night, when the patient is quiet in bed, and where no external cause of disease can be applied; so that here we look simply, in explaining the phenomena, to a certain morbid state of the system of the individual in whom the inflammation takes place. Here the affection of the joint does not arise from direct agency upon the part itself; the local affection is rather the external appearance of some inward or more general affection.

So far, then, as the cause goes, you see an obvious distinction between the three cases. *Common* inflammation is the general result of local agency upon the part; *rheumatic* inflammation requires a certain external agency, combined with a predisposition of constitution; and *gouty* inflammation is the result simply of a morbid state of the constitution, without any external cause.

In common inflammation there is a regular progress of the affection—it goes on uninterruptedly. The symptoms are at first slight, they become more considerable, and the disease gradually increases to a certain extent—to its obvious and full development. It remains for a certain length of time in a state of full activity; it then gradually declines, goes off, and leaves the patient without any liability to a future attack of disease.

In rheumatic inflammation, on the contrary, the affection is speedily developed in its full amount. The joint is swelled, excessively painful, and becomes at once fully inflamed. Very soon after it appears in one joint, the affection will shew itself in another; so that you will not have it long confined to one spot. The disease suddenly ceases in the part where it has first appeared, and at the same time it will appear in others. It will cease in the part, and perhaps again return to it; and after the

affection is gone, the patient will be very liable to future attacks of a similar kind. But the sudden development of the disease in its full extent, its sudden and abrupt cessation, its extension to other joints, and its affecting several of them at the same time—these are circumstances that particularly characterize an attack of rheumatic inflammation.

In gouty inflammation, the disease, as in the rheumatic affection, possesses its full character at the first onset of the affection. The commencement of the attack is characterized by severe pain in the part; this increases to a high degree, and then gradually declines. The patient becomes comparatively free from pain, but within a short time the pain again commences, and again goes through its several stages. The attack of gout consists of a series of paroxysms, which, after a time, diminish in intensity, and then disappear. Here, as in rheumatism, the complaint often abruptly ceases in one part, while it extends to other joints, after which the joints that have been the original seat of it may again become affected.

In the case, then, of common inflammation, we have nothing to observe but the immediate development of inflammation in the part, consequent on a local cause. But in the case of rheumatic or gouty inflammation, we have the local inflammation—that is, the affection of the part, and we have something else superadded to it; and the main object of the inquiry is to find out what is the nature of the additional circumstance which distinguishes gouty or rheumatic from common inflammation of a joint. Now we find that a person who labors for the first time under a gouty attack, is almost invariably in a state of unnatural fulness of habit—that is, his constitution is in that state which is produced by excessive nutrition—the result of luxurious habits and indolence. Gouty inflammation takes place particularly in individuals who are of a sanguine temperament, and in those of robust habit of body. Generally speaking, it takes place in the higher classes of society—at all events, in those whose situation in life gives them the power of indulging in sensual gratifications and indolence; for where persons possess no means of indulging their appetites, and are obliged to work for their sustenance, they very generally escape attacks of the gout.

At the time when a gouty attack takes place in a joint in the first instance, we shall find that the patient has a full, strong pulse; that there is considerable heat of surface; that there is a white tongue, a state of costiveness and disorder of the digestive organs—that is, that those circumstances are present which indicate a plethoric condition of the system; a state of plethora, from excess of nutrition. We cannot say that

the symptoms in such a case depend simply on a disorder of the digestive organs, though such disorder is worse at the time—in truth, the development of that state of the system which seems to give a disposition to gout, requires a sound and active state of the digestive organs. It is necessary that a person should have a good stomach, capable of digesting a great deal, and that the stomach should be active, in order to assimilate the large quantity of new aliment that is introduced into the system—the excess of supply which constitutes the state of plethora in gout. If the stomach be feeble, and easily disordered, the existence of the state of plethora is precluded. You will find, therefore, that the persons who are the subjects of gout are those that have very strong digestive powers, and that have the means at their command of taking large supplies of food. Now the state of plethora that I have just mentioned will commonly be attended, when it comes so far as to produce disease, with more or less disorder in the digestive organs; and the attack of the gout is generally preceded by symptoms of that kind. You find, before the attack, that it is common for the person to feel remarkably well; and during the day preceding the night in which the attack comes on, in general the patient feels very comfortable—so that we cannot by any means regard the disorder of the digestive organs simply as the cause of the phenomena of gout; although disorder of the digestive organs is likely to be one of the circumstances which will exist in conjunction with the state of plethora which gives a disposition to gout.

I may observe, that these symptoms of disorder in the digestive organs are, for the most part relieved, as the general state of the patient is, by the attack of gout—that is, the occurrence of gouty inflammation in some joint or joints of the body, relieves the system of that plethora under which it previously labored.

Now I speak of the condition of a patient when he first becomes the subject of gouty attacks; for when these attacks have been repeated—when a great part of the joints of the body have been over and over again inflamed in gouty persons—when a person has suffered for a great series of years from successive attacks of gout—and when such person has experienced that depression from the attacks which frequently comes on in gout, (undoubtedly the power of the system is reduced by the disease, and also by the advance of years)—the state of such a patient is different from that I have mentioned. You do not now find the circumstances denoting active plethora which you did at the commencement of such attacks;—you will find a state of deficiency in the various excretions; and this accompanied, perhaps, by a degree of languor in the general action

of the system, and with a state in which there seems hardly power to form gouty paroxysms. But in order to understand the real nature of the affection, we must direct our attention to the period when it commences. At a more remote period, there is a mixture of that state of the system which produces gout with the local disease which affects the different organs of the body,—so that the real nature of the complaint becomes obscured.

Now we can have little difficulty in pointing out what should be the proper mode of treating such an affection. The disease in the part itself is by no means the most important circumstance in the case; it is rather one of secondary consequence—therefore the main object will not be in this case as in one of common inflammation produced by injury—to employ those local means for reducing the inflammation that would be proper if the local inflammation were the principal circumstance to be considered. Generally speaking, we may almost neglect the consideration of the local affection under such circumstances. The local affection indeed, in cases of gout, may be considered as a kind of means adopted by nature for relieving the system of that state of plethora in which it was previously found. The local affection is a sort of safety valve to the constitution, by which the diseased action goes on without danger; and the local affection finally carries off the complaint, which might otherwise shew itself in more important consequences. Warmth, therefore, and rest, are the principal considerations in treating the local affection in gout, if it remain within moderate limits; but if it go beyond this, we may employ leeches to the part, warm fomentations, and so forth. But our attention should be principally directed to remedy the state of plethora from which the local symptoms are derived; therefore, under such circumstances, we should take blood generally, purge freely, administer calomel and antimony in conjunction with other aperients, and put the patient on low diet. After the employment of venesection and the exhibition of low diet, we derive great advantages from a remedy that is of recent introduction—namely, colchicum. This remedy commonly acts on the bowels, frequently produces perspiration, and lowers the pulse. It is given in various forms—either in the shape of powder, the powder of the bulb dried, or a kind of vinegar, formed of the same part of the plant, or of the seeds; perhaps the latter is the most certain, the most infallible in efficacy, and on that account to be preferred. Now this remedy has so beneficial an influence in cases of gouty inflammation, that many persons consider it a specific; they regard it as possessing some peculiar power of removing those effects which gout is capable of producing.

Such are the means by which the condition of the symptom which gives origin to the gouty attack in the part, may be removed. The more important consideration perhaps is, what means can be employed to prevent the recurrence of such attacks? for if those habits of living, which, in the first instance, have produced a state of plethora, be continued, you can have no doubt that the individual will be the subject of future attacks of gout; that these will become more and more severe, extending to a greater number of parts of the body, and ultimately reduce the patient to a state of suffering in which life perhaps possesses little worth having. Now there are two modes which persons may take to free themselves from this condition of the system, and unless they adopt these two courses, they will not succeed in the object. The two means are *temperance and exercise*. Persons must be contented to work hard, and to live very moderately; they must, to use a common phrase, "keep their eyes open, and their mouths shut;" if they do not this, they will continue to suffer from gout. Now the truth is, all mankind like to have sensual gratification; they wish to have the power of indulging their appetite;—to eat and to drink, and to take other gratifications, leading indolent lives, and yet they want also to have health. They want to have two things that are incompatible: but people must be reasonable; they must determine which they will have: they may have good eating and drinking with bad health, but if they would have good health, they must abandon the other. The truth is, persons wish us to give them the means of having health, while they pursue these gratifications. We can give them their choice of these, and if they will continue eating and drinking, and bring on the gout, we can, to a certain extent, alleviate their sufferings when they arise; that is, we can treat the case so that the patient can go on a little longer. But if we speak of the cure of the gout, I know only one alternative; the state of system that renders a person liable to these attacks must continue, unless he will be temperate in his living and active in exertion. I know no other means of accomplishing the object except these.

Now it is a question whether we are to confine our notions of gout simply to its effects on the joints of the body, or whether we are to consider that other organs, other textures, are liable to inflammation that we should call gouty? When we see that gouty attacks consist in a condition of plethora, a state of overfulness, we understand that a person will be liable to attacks of inflammation in other parts as well as the joints. We find that individuals who are subject to gout, have inflammatory attacks in the head, or chest, or abdomen. We not unfrequently

find when the disease suddenly ceases in the joint which is the subject of gout, that it shews itself in some of the internal parts, and this is a very powerful reason against adopting any violent measures for putting a stop to, or repelling gout when it appears in the external parts of the body. The tendency which exists under such circumstances to the establishment of serious inflammatory disease in some important internal organ, has shewn the propriety of attending to this point. Hence, according to common sense and reason, you will not judge it expedient to adopt measures of that kind; you would rather bear the evils of a gouty attack when it is seated in the extremities, than run the risk of repelling it, and of having the disease appear in more important parts. Now when disease takes place in gouty individuals in these internal parts, it has all the same symptoms which would characterize common inflammation occurring in those parts. There are no external signs by which we can distinguish a gouty attack in the head, chest, or abdomen, from other diseases in these parts; and when we come to examine the individual after death, we are not able to distinguish gouty inflammation as it shews itself there, from inflammation occurring from other causes.

There is, however, one instance in particular, in a part that is comparatively external, in which we see the peculiar character of inflammation produced in gouty individuals; namely, the iris of the eye. That is a part liable to inflammation in persons of gouty constitution, and the inflammation that occurs in the iris, exhibits some peculiar characters which enable us to distinguish it from other inflammatory affections of the part. I will relate a case to shew you, that that texture, like the joints of the body, may be the seat of repeated attacks of inflammation, ending perhaps in its disorganization in individuals of gouty constitution. I was consulted during the last summer by a gentleman, 40 years of age, a stout person, of sanguine temperament, fair complexion, with rather light eyes, and the history of the gentleman's case was this:—He had lived a luxurious and dissipated life at Oxford, drinking freely of port wine. At the age of twenty-two he had a severe attack of a kind of gout, that is, a painful affection of the joints and other parts, which lasted several months. This induced him to leave off port wine; but he has always enjoyed an excellent appetite, and has been in the habit of eating largely, and drinking freely of beer. He has had ten attacks of inflammation of the right eye, and the left has suffered on two occasions; at one time the inflammation occupied three years, and at that time he had some swelling in the right hand: with this exception, he has not suffered in the joints or limbs since his first illness. Now in

the right eye, in which there were so many attacks of inflammation, the iris was changed in structure, so altered that you could hardly recognize the natural texture of the part, and vision was nearly extinct. Here you see the cause which produced that state of the system on which the disease depended.

I performed an operation for cataract on a gentleman who had lost one eye entirely, in consequence of inflammation of the iris, and he had an attack in the other, in consequence of the same affection. This was a gentleman, 55 years of age, of fair complexion and sanguine temperament, and who had passed several years in the West Indies, and lived there freely, usually indulging in spirits. He had suffered greatly from gout affecting the joints of both hands, which were swelled and knotted in a remarkable manner, so as to destroy their natural appearance altogether. (This is a circumstance that occurs when gout is frequent in the joints;—there is a deposition which is called chalk: although it is called chalk, it consists of urate of soda and phosphate of lime, and is peculiar to gouty inflammation, though not an essential part of the process; indeed in the early stages you will not find this deposition;—it forms in the fingers, where there are rough lumps, which present an unnatural appearance.) The pupil of the lost eye was nearly closed, and there was opacity of the capsule of the lens. Being unwilling to operate on account of the gouty inflammation, I recommended him to use belladonna, which he did, and I at last operated by his wish rather than my own desire. The gouty disposition was so strongly marked in both eyes, and he suffered so much from gout, that I thought the operation would bring on gouty inflammation again. He lived low for several weeks, and took plumber's pill and purgatives. At the time of the operation I broke down the capsule, and destroyed the lens in that situation, and fortunately no inflammation followed, yet the state of the pulse made me bleed him five times after the operation. In about two minutes the operation was completed, and he had perfect vision. I remember he mentioned to me, when asking him about the state of his fingers, that of late years, though he had suffered from the gout, he had now got a perfect remedy, and I found that to be colchicum. Whenever he had any symptoms of the gout, he took a few doses of colchicum, and he found that that prevented the occurrence of the attack.

In *rheumatism* we find the state of the constitution in some measure analagous to that of gouty persons, though not altogether similar to it. The occurrence of a rheumatic attack is preceded by symptoms of indigestion and fever. That state of the system occurs frequently before the joints swell. The swelling of the joints is accompanied too in this case with considerable febrile disturb-

ance of the system, which is not to be regarded simply as a sympathetic effect of local disease; for the local disease and the febrile disturbance appear in a great measure independent of each other. Sometimes the fever subsides, and the rheumatic affection of the joints seem to go on much the same. That there is generally a marked distinction in the state of the system in this case appears clear from the circumstance, that if you bleed a patient in the state that precedes rheumatic affection, or bleed him in the early period of the rheumatic affection of the joints, you find that the blood exhibits an inflammatory character—you have evidence that the state of the blood is changed, or there is something morbid in the system, that shows itself in the marked condition of the blood.

The treatment here, then, will consist essentially, in the early periods of a rheumatic affection, of the same measures that I mentioned to you as applicable to the treatment of gout; that is, you must attempt to remove the state of the system from which the rheumatic character of the inflammation is derived, and this is accomplished more by general means than by such as are directed to the state of the inflamed joints. The moderate loss of blood in these cases is advantageous; to which we add the employment of aperient medicines, light diet, and rest;—while the treatment of the part, as I have mentioned, in cases of gout, must depend in some measure upon the severity of the local symptoms. In some cases, local treatment alone is sufficient, without other means. You may employ local bleeding, fomentations, poultices, and subsequently blistering. In rheumatism, too, the administration of colchicum is very beneficial, though it does not exert quite so decided a power in controlling rheumatic, as it does in gouty affections. Rheumatism, certainly, we are acquainted with principally as it affects the joints of the body. Like gout, it appears to attack chiefly the synovial and fibrous structure of the joints; but in common language, rheumatism is understood in a more extensive acceptation, and comprehends affections of the muscles and several other painful affections of parts not immediately connected with the joints, which perhaps ought properly to be ascribed to other causes. It may be a great doubt whether painful affections of muscular parts of the limbs, and painful affections occurring about the back, and many other situations, are properly to be considered as belonging to the same kind of disease as rheumatic inflammation of the joints themselves. It is probable that several of the latter ought rather to be placed under the head of neuralgia, or affections of the nerves, than to be regarded simply as cases of rheumatism.

A continuance of the subject of specific

diseases will lead us in this next place to the Venereal Disease, but we have not time to say much upon this subject, and therefore I believe it will be better to defer the commencement of it till our next meeting.

CLINICAL LECTURE
UPON THE
OPERATION FOR HERNIA.

By CHARLES BELL, Esq.

Surgeon of the Middlesex Hospital, and Professor
of Surgery in the University of London.

Case of Strangulated Hernia.

— G —, æt. 84, was admitted into the hospital on Friday, 12th instant, having a large scrotal hernia, which could not be reduced. He has been subject to hernia for the last twenty years, and has worn a truss. This morning, at three o'clock, the tumor suddenly came down; it increased in size so as to be larger than it had ever been before, and he was unable to reduce it. He went to a surgeon, who attempted the reduction, but without success, and in the afternoon he was brought to the hospital. The tumor was large, irregular, and very tense, particularly at the upper part, where there was a distinct round swelling, like an additional lobe to the greater tumor. The pillar of the ring was very distinctly marked by a deep transverse furrow. The taxis was tried, first by the house-surgeon, and afterwards by the surgeon of the week, for twenty minutes. The patient was then put into the warm bath, a stimulating clyster was administered, and again the reduction was attempted; but nothing seemed to relieve the distention of the tumor. After consultation, the operation was determined on.

An incision was made through the integuments, opposite to the neck of the sac, and the tendon of the abdominal muscle was laid bare. A small puncture was then made into the neck of the sac, just large enough to admit the directory; this instrument was passed up into the abdomen, but the sac was not slit up. The bistoury was introduced between the tendon of the abdominal muscle and the peritoneum, and the upper edge of the pillar of the ring was divided—it tore audibly on the slightest touch of the instrument. So great was the tension, that the moment this was done a noise was heard in the tumor, obviously produced by the flatus from the portion of intestine in the sac passing into that which was in the abdomen. A little more dissection of the ring was made, and then slight pressure on the scrotum caused the whole of the contents to slip up into the abdomen.

After the intestine was reduced, a very large quantity of limpid fluid spouted from the puncture in the sac. The wound was dressed in the usual way. Forty drops of laudanum were given in warm wine and water, and a purgative clyster was administered.

Feb. 13th.—He has had no relief from his bowels; his abdomen is full, but neither hard nor painful; his tongue is moist; his pulse tolerably good, but with a slight intermission; his extremities are very cold. He was ordered ten grains of calomel, and a common clyster; warm flannel to be applied to the abdomen, and a bottle of hot water to the feet. In the afternoon the dose of calomel was repeated, and leeches were applied to the lower part of the abdomen. At nine o'clock he had two copious evacuations from the bowels.

Feb. 14th.—The belly is distended, but there is no tenderness; the tongue is moist; pulse 80; no hiccough. He has been ordered two pills of calomel and colocynth, with an aromatic draught; a blister to be applied to the abdomen. Ten o'clock P.M.—He is perfectly sensible, and expresses himself very grateful to those attending him. His abdomen is more distended; his pulse is 88, and unsteady; he vomits whatever he drinks.

Feb. 15th.—He died this morning with no other symptoms than of increased distention of the abdomen.

Dissection.—A portion of omentum was contained in the sac of the hernia; it was not at all inflamed, neither was the interior of the sac. Within the abdomen the intestines were distended, but not inflamed; on the contrary they were pale, and altogether unlike those of a person dying after the operation for hernia. There was a portion of the ileum, the form of which indicated that it had been in the sac, and this notion was confirmed by a slight degree of discoloration at its narrower part. There was no serum in the abdomen, neither were there flakes of coagulable lymph, nor inflamed spots, on the peritoneum.

Gentlemen, this is a case too important to be passed over: it has extensive bearings upon the important and ever-returning questions:—What is the time, and what is the mode of performing the operation for hernia?

When I last drew your attention to the subject, it was to mark the peculiarities that attend the large scrotal hernia. I shall continue this subject to-night, and it is particularly necessary for you to bear in mind that my remarks are limited to that form of the complaint,—the large scrotal hernia, for the most part occurring in old men. You have seen that

the common mode of operation is attended with certain and obvious inconveniences—that when the knife is drawn extensively along the whole face of the tumor, and the sac is opened to the same extent, the intestines evolve themselves in a very surprising manner, as if the whole bowels were turning out of the abdomen. This is the consequence of the pressure being taken off by the opening of the sac: and now begins a labor which is for some time ineffectual, of restraining and emptying these intestines: the surgeon following the old rule of reducing that portion which last came down, attempts to push up the intestines near the ring: he introduces, therefore, his finger through the ring, necessarily squeezing or compressing the gut, and each inch of the intestine, successively, is submitted to a sort of kneading process. This is necessarily tedious; the intestines are long exposed, they are thoroughly handled, and each particular portion pinched, the natural consequence of which is a fatal result. Dissection confirms us in our notion of the cause of failure here, for when the abdomen is exposed we see a mass of inflamed intestines, for the most part glued together by coagulated lymph, at all events distinguishable from the rest by the hues of inflammation or of mortification, and these can be recognized as the parts which we had seen handled in the operation during the patient's life.

We find in this patient the common circumstances attending the strangulation of a large hernia, coming down from time to time, and reducible. But it happens on some occasions that an additional portion or knuckle of the intestine is forced down by the side of that which commonly occupies the sac, and this portion runs rapidly into strangulation, or, at least, becomes filled, so that the reduction is rendered difficult. I believe that this took place in the present instance, from that passage in the case which describes a small tumor near the neck, and distinguishable from the general convexity.

With respect to the mode of operating in hernia, you will observe that this ought to vary according to the difference in the size of the tumor. If you are describing the operation of a surgeon on a small hernia, you would say that he drew his knife over the whole tumor, from the top to the bottom. But

wherefore is it that he does this? It is because, unless he make an incision of a certain length, he cannot prosecute the last part of the operation—he cannot divide the stricture. When the tumor, on the other hand, extends seven or eight inches, to make the incision all the length of it, betrays that the surgeon has no distinct notion of the object of this part of the operation. It may enable the bystanders to say that they have seen the operation very well—that the intestine and the omentum were displayed very distinctly; but how stands this in reference to the patient? Ought there to be this display? There ought not; you should see very little,—that is to say, an incision from three to four inches in length, opposite to the neck of the hernia; a neat dissection of the upper pillar of the ring; and an investigation made whether the stricture results from the embracing of the tendon. When the surgeon has arrived at this stage, the operation may be prosecuted in two ways: the sac may be punctured near its neck, the directory introduced from this into the abdomen, and the stricture cut from within; or, the firmer fasciæ, which are around the neck of the sac, and the upper margin of the ring, may be lifted by the directory in succession, and divided until only the proper peritoneum, thin and almost transparent, is between you and the intestine: the stricture being thus removed, and nothing but the elastic peritoneum remaining, the scrotum may be grasped, the contents of the gut squeezed out, and the hernia reduced. In either mode of operating, the advantages are these: that you do not permit the exposure and evolving of the gut—you have not the distended intestines among your hands—they are not submitted to that *handling* which I conceive to be so dangerous; and if it should so happen that the mouth of the sac is large and the intestines apt to slip down again, they do not lie exposed in the wound, but only slip again into the sac.

If I were treating this question in a general lecture, the inquiry would assume a speculative character: it might be said, that the stricture is so incorporated with the proper sac that it can never be dissected off its mouth. But see what has occurred in the present instance,—no sooner was the margin of the pillar divided by the bistoury, than the pent-up flatus was re-

leased, and the croaking of the intestine gave token of relief. Again it may be said, that you may reduce the intestine in an improper state for reduction: Now the matter stands practically thus: You are endeavouring all you can by the taxis to reduce the intestine; you find, from the form of the neck and the abrupt notching of it by a cross band, that you cannot succeed. You say, if it were not for that, I should succeed in the operation of the taxis: you try it again, and fail. In ten minutes from that failure you may have the stricture undone, and the cause of strangulation removed; and why not then reduce the intestine?—because it may be in a state unfit for reduction! Does not then the objection apply to the last steps of the taxis? Indeed, I believe that, practically speaking, this is no objection at all; or, if it be, the advantages are greater, inasmuch as the operation is rendered more simple, is attended with less danger, and therefore may be had recourse to earlier. This is not a new mode of operating: read the chapter on this subject in Petit's works: it was recommended also by Dr. Munro; and the latter made pretensions, the strength of which I cannot determine, to the originality of this proposal: his object in it, however, was very explicitly declared to be the exclusion of air from the *sac*, to which he attributed all the mischief in unsuccessful cases of hernia. As a general rule of operating, I would say it was exceptionable, and I, therefore, once more remind you that I am speaking of the large scrotal, or indeed of any large hernia. Let the rule be this, that you make your dissection—for I call it a dissection—on the neck of the sac, and not on the most prominent part of the tumor; that you divide the transverse fibres of the fascia, and the edge of the upper pillars of the ring; that failing in this manner to relieve the gut, you puncture the sac near the stricture, introduce your directory, and divide the sharp edge of the stricture from within. To this there can be no objection, because you see the surface of the intestine, although you do not largely expose it, and you have the jet of serous fluid from the sac; which two circumstances will give you sufficient token of the condition of the gut.

Adverting to the death of the patient, I can only say that the appearances on dissection were quite unlike what usu-

ally characterize the intestines after the operation. The defect seemed to be, that they had lost all tone, and permitted the flatus to be evolved within them. This, with the extreme coldness of the extremities, and the absence of all symptoms of inflammation during life, as well as of morbid appearances afterwards, in my mind implies that the patient died of exhaustion.

[On Friday, the 18th instant, Mr. Bell resumed the subject of Hernia in his clinical lecture.]

Gentlemen, I am tempted to continue the subject of last night's clinical lecture, because a woman has been since brought to the hospital suffering from hernia, and in circumstances which further illustrate our subject. This patient was sixty years of age. She had a labial hernia; that is, you know, a hernia descending through the abdominal ring, and gradually falling into the labium, as the inguinal hernia drops into the scrotum. She has been subject to rupture for twenty years. No truss had been used. When brought into the hospital, strangulation had been present for thirty hours. The tumor was incompressible. The general symptoms were shivering, vomiting, and tenderness of the abdomen, notwithstanding several stools had been procured by injections. The usual processes were had recourse to; reduction was attempted by the taxis; she was bled, put into the warm bath, had clysters, and again the taxis was employed, but ineffectually.

Observe, now, what occurred during the operation in this case, and mark the contrast with the former. The neck of the sac being disclosed, the ring of the abdominal muscle was found to be loose or free. The sac was opened; and immediately a vast quantity of serum was ejected from it. The intestine, far from being distended, lay flat within the sac. It was dark-coloured, and had a coating of lymph upon it. The finger was used as the directory: it could be passed through the external ring, and the stricture was found to be in the internal ring. It was divided, the finger being within the sac, and the only directory used to guide the bistoury. This morning the report was most favorable: she had copious stools, all tenderness of the belly was gone, and the tongue was clean.

First, I ought to remind you, that

when we say the intestine had been strangulated for thirty hours, there must be some incorrectness in our language. I shall not attempt to explain the whole of this subject, but confine myself to this statement—that the symptoms which direct us are those of a confined or incarcerated intestine. This condition produces pain and vomiting; but whether the intestine be pinched to such a degree as to prevent the circulation of the blood through it, we have no means of knowing. Indeed it is this, our ignorance of the actual state of the intestine, which makes every new case one of anxiety. I cannot direct you to any book where the question is discussed how long the intestine will live when the veins are gorged, and the arterial action in it stopped.

The next circumstance of this case deserves your most earnest attention. You will observe that in the former case, of scrotal hernia, when the sac was punctured no fluid spouted out; but when the intestine was reduced, an abundant flow took place from the abdomen. In the present instance the tumor was particularly tense; a great quantity of fluid escaped the moment the sac was opened; and the intestine presented a flattened appearance. These are circumstances very important in the pathology of hernia. I shall very soon shew you, in the regular lecture, when treating on this subject methodically, that it is the distention and gorging of the intestine, and the sudden angle which it consequently makes round the stricture, that impede the circulation, and bring on strangulation. Here, in the present instance, I believe the intestine was protected by the great pressure of the fluid which lay over it, and thus retarded the catastrophe of actual strangulation, while it made it of more easy reduction. But it is with a view to the circumstances of the former case, and the question of dividing the stricture, that I detain you to examine this. I was particular in stating, last evening, that my remarks were confined to the large scrotal hernia. In the present case you saw that it was necessary to make the incision large in proportion to the size of the tumor; and that the stricture was not at all in the pillar of the outward ring, but in the inner abdominal ring. Hence it was that the sac was opened, and the division of the stricture made from

within; the stricture being, in all probability, partly in the neck of the sac itself, and partly in the margin of the transversalis fascia.

PHYSIOLOGY AS CONNECTED WITH ATMOSPHERICAL INFLUENCE.

By HARDWICKE SHUTE, M.D.

(Continued from page 661.)

HAVING pointed out the connexion which subsists between the supply of oxygen and the florid color of arterial blood, we have now to consider how the absorption of oxygen is connected with that more important change by which the blood acquires, in its passage through the lungs, the property of contributing to the support of living action.

We have seen, by Dr Goodwyn's experiment, that, in the toad, the contraction of the heart uniformly corresponded with the change in the color of the blood; and it may be advisable to shew that this important fact has been confirmed by experiments on warm-blooded animals. "If the air is confined in the lungs of a quadruped, it soon loses its power over the blood, which remains dark. This experiment," says Mr. Hunter, "I have repeated several times upon several animals, and commonly for half an hour at a time, which was sufficient to allow me to make my observations with coolness and accuracy. In the first part of the experiment, it was curious to see the coronary arteries turn darker and darker, becoming like the veins which run on each side of them; and, on blowing again, resuming gradually a bright color, till they became of a florid red."—Mr. Hunter, by means of a double bellows, was enabled by one action to exhaust the lungs of their air, and by another to pass, at the same time, fresh air into those organs, without mixing them together; and having introduced the nozzle of the bellows into the trachea of a dog, whose heart and lungs had been previously brought into view, he found that while he continued the artificial breathing the heart continued to act, but more frequently than before; if, however, he stopped the bellows, the contractions of the heart gradually be-

came weaker, and at length ceased. He observed, that every time he left off working the bellows, the heart became extremely turgid with blood, and that the blood in the left side was as dark as that of the right, which was not the case when the bellows were working.

This correspondence between the florid color of the blood and the contraction of the heart—the connexion of this color with the supply of oxygen having already been pointed out—must be considered as warranting the inference that oxygen contributes, directly or indirectly, to the contraction of muscular fibre. Is the contraction referable to the presence and agency of oxygen in arterial blood, or of a distinct power created by its agency? Physiologists have frequently, not always perhaps intentionally, expressed their opinions upon this subject; but these opinions are so nearly balanced, that we cannot look to authority for an answer to the question. “The chemical change,” says one physiologist, “which the blood undergoes in the lungs, by respiration, gives it a *stimulating quality*, by which it is fitted to excite the left auricle and ventricle to contract.”—“It is,” says another physiologist, “principally, if not wholly, dependent on the *oxygenation* of the blood.”—“As soon as the action of the left side of the heart is increased by the stimulus of florid blood, the right also acts more powerfully.”—“The irritability of this, like that of every other muscle, can alone be maintained by *duly oxygenized blood*.”—“Food and air are to be considered in the same light, both only supplying materials for the system to act on, and *not themselves acting* independently of the animal.”—“May not vital power, then, so essential to heat, be considered as the *proximate cause* of irritability?” Innumerable examples might be adduced to shew that physiologists, equally attributing the healthy state of the blood to the influence of oxygen, are wholly undetermined as to the mode of its influence—that is to say, as to its direct or indirect agency in promoting the contraction of the heart.

We have seen that the oxygen expended in respiration is absorbed by the blood; and yet there is no evidence that arterial contains more oxygen than venous blood. “We are ignorant of the precise differences which constitute

the distinction between venous and arterial blood.” “If it is asked whether there be any difference betwixt the venal and arterial blood? we answer, that some difference there appears to be, the latter having lately passed the action of the lungs; but in experiments, I scarce find any observable difference either in color, density, or any other known diversity.” “But if, either by the function of absorption or by the operation of chemical affinity, air did enter into the blood, we may surely with reason demand some proof of its existence; yet, says Haller, *nulla unquam in vivo calido animali bulla aeris in sanguine visa est*.” That the peculiar properties of arterial blood do not depend on the presence of oxygen, may also be inferred from the experiments of Bichat, in which the functions of an exhausted animal were restored by the transfusion of arterial, and wholly uninfluenced by that of oxygenized blood. It appears also that blood, if merely oxygenized by artificial respiration, does not restore the contraction of the heart. “This change of color may be readily accomplished in the pulmonary blood, by merely inflating the lungs with common air; but experience shews that inflating the lungs of an animal apparently dead, though it changes the contiguous blood to a florid state, yet, unless it also succeeds in restoring the natural action of the heart and lungs, it avails nothing towards the restoration of life.” “The mere blowing in of air neither infallibly excites the action of the lungs, nor does it, as some suppose, change the blood; for this change is an action dependent on life, and cannot be imitated by the chemist more than digestion.” We arrive, then, at the conclusion, that oxygen is, directly or indirectly, a cause of the heart’s contraction, but can neither be discovered nor rationally presumed to exist in arterial more than in venous blood; and yet we have evidence of its absorption.

The most obvious solution of this difficulty appears to be that which questions altogether the absorption of oxygen, and confines its agency to the air-cells of the lungs; but this explanation is inadmissible, because irreconcilable with those “direct and unexceptionable experiments which may be regarded as proving both the absorption of oxygen and the exhalation of carbonic acid.” The explanation is

also, we conceive, inadmissible, because, as we shall have occasion to shew, the agency of oxygen in promoting the excretion of carbon does not sufficiently account for the conversion of venous into arterial blood.

The next explanation is that which presumes the absorption and an immediate union of the oxygen with the carbon of the blood, and its instantaneous expulsion in the form of carbonic acid; the peculiar property of arterial blood being thus restored, rather than generated, by the purification of venous blood. There are many difficulties connected with this view of the subject; such as the rapidity of the presumed operation, the simultaneous processes of absorption and excretion, and the sudden union of oxygen with carbon at a temperature not exceeding that of the blood; but we pass them over for the purpose of arriving at an argument which appears to be more conclusive. The experiments of Millet, Cruickshank, Abernethy, and Jurine, all concur in the fact of carbonic acid being evolved, that is to say, secreted or exhaled by the vessels of the skin. The same result has not, from circumstances hitherto unexplained, attended the experiments of some other physiologists; but, says Dr. Bostock, "Jurine's experiments were of so simple and direct a nature, that it is not easy to conceive how he could have fallen into any material error, either in their execution, or in the inference which he deduced from them." Assuming, therefore, the correctness of the fact, we feel authorised to suggest the following difficulty of its application to the theory which attributes the peculiar properties of arterial blood to the exhalation or secretion of carbonic acid alone. If the conversion of venous into arterial blood be solely owing to the evolution of carbonic acid in the lungs, how does it happen that when carbonic acid is evolved by the vessels of the skin, this change is so far from taking place, that arterial immediately passes into venous blood? The obvious inference will be admitted by those only who are satisfied with the experiments in favor of the evolution of carbonic acid by the vessels of the skin, and therefore we will endeavour to present the argument in what appears to be a less exceptionable form. If, in respiration, the oxygen is absorbed and united with the carbon for

the sole purpose of promoting its excretion in the form of carbonic acid, it follows that the purification of the blood implies only the excretion of carbon, since the oxygen merely operates by promoting its excretion. Now there is scarcely a secreted substance which does not contain carbon in some form, and therefore the effect of secretion ought to be that of purifying the blood. Such, indeed, is the acknowledged effect of many secretions, and yet the blood, when purified by secretion, is more venous than it was before, that is to say, more incapable of contributing to the support of animal action. It may, perhaps, be said that the excretion of carbon from arterial and venous blood are not analogous cases. Is the character of the blood arterial, I ask, after it has been deprived of a portion of its carbon by the action of the liver? It is, we think, obvious that the excretion of carbonic acid does not sufficiently account for the conversion of venous into arterial blood in the lungs, and the inference that the oxygen does not unite with the blood for the sole purpose of uniting with the carbon of that blood, is, in our opinion, irresistible.

There is a modification of this theory which supposes a portion only of the oxygen absorbed to unite with the carbon of the blood, and a portion to circulate through the system for other important purposes. "Respiration, we are told, is a case of compound elective attraction, in which the oxygen gas is decomposed, and enters into new compounds; a part seems to be absorbed by the general mass of blood circulating through the lungs; a part unites with the hydrogen of the venous blood, and forms water; another part with the carbon of this blood, and forms carbonic acid." Now it is obvious that by this hypothesis we are only carried back to the original difficulty, since the presence of oxygen in arterial blood is assumed, in opposition to the facts that such presence can neither be demonstrated, nor rationally inferred. This, we may observe, is not the only difficulty, because, if a portion only of the oxygen absorbed be immediately returned in union with carbon, there is a greater disproportion between the quantity of oxygen thus employed, and that contained in the carbonic acid expired, than seems to be consistent with the experiments of modern physiolo-

gists. This objection does not apply so forcibly to that theory which supposes the whole of the oxygen absorbed to circulate through the system, and to unite, in the course of its circulation, with the carbon, for the purpose of being excreted in the form of carbonic acid upon its return to the lungs; but the former objection is obviously increased, in the ratio of the difference between the whole and a portion of the oxygen absorbed.

The reader must at once perceive, by referring to these several explanations, that the main and almost exclusive object of physiologists has been to suggest some idea which would reconcile the disappearance of oxygen and the substitution of carbonic acid with the various phenomena of respiration, little or no attention having been paid, with one exception, to the compatibility of that idea with the acknowledged laws of the animal system. The original idea upon which these several explanations are founded, is, with the exception before alluded to, wholly unsupported by observation, and not even by inference further than that which presumes the correctness of any idea which can be made in any way to correspond with the various phenomena of respiration. Is it surprising that, under such circumstances, "there is no inquiry in the whole range of physiology in a more unsatisfactory state, than that concerning the ventilation of the blood in the lungs?"

How, then, are we to reconcile the facts of oxygen being expended in the process of respiration, being absorbed and united with the blood, with the facts equally well established, that the presence of oxygen in arterial more than in venous blood cannot be demonstrated by chemical tests, or be rationally inferred from the effects of oxygenized blood upon the animal system. The whole difficulty appears to consist in the unwarrantable assumption that respiration is a chemical and not a vital action. The peculiarity of life consists in its opposition to the laws of chemistry, in its power of resisting their agency; and it cannot therefore be a matter of surprise that the product of a living action is no longer obedient to the laws of inanimate matter. If the oxygen has, by a living action, been converted into an animal principle, endowed with peculiar properties, is there any difficulty in understanding how the

oxygen may exist in its altered form, and be no longer obedient to the operation of chemical tests; or why oxygenized and arterialized blood are endowed with different properties? Chemistry, in fact, is wholly unconnected with the question, since all blood must be venous; that is to say, deprived of its peculiar property of contributing to the support of living action, before it can be the subject of a chemical experiment. The idea of an animal principle being generated by respiration is, it may be said, wholly gratuitous and imaginary. What is the nature of this principle? If oxygen has lost its chemical character, how is the carbonic acid generated by its agency? Before answering these questions, we beg leave briefly to state that the whole of the oxygen expended is, in our opinion, converted by an animal action into an animal principle, and thus rendered available for the purposes of the animal economy.

It is much to be regretted that we might admit the idea to be wholly gratuitous and imaginary without being in at all a worse situation than our contemporaries, since the present theory of respiration is entirely founded on the presumption that the compatibility of an idea with the phenomena of respiration is a sufficient guarantee for its correctness. May it not be reasonably required that such idea be also compatible with the laws of a living body? How can the physiologist acknowledge, as the peculiarity of life, the power by which a living body resists the chemical agency of inanimate matter; and rationally assume, in support of his opinions, the fact of the living body being a laboratory, where the laws of chemistry are in full force, and wholly uninfluenced by those of life. "It appears to me," says a well-known physiologist, "to betray the greatest possible ignorance of physiological knowledge, to pretend to apply the laws by which the animated system is governed to those that regulate the properties of dead or common matter." It is, on the contrary, consistent with the acknowledged laws of life to presume that oxygen is, in the process of respiration, converted by an animal action into an animal product; and the idea has a greater claim to our assent, in the ratio of its greater compatibility with the peculiarities of a living body. It is also entitled to our assent inasmuch as it explains, consistently with the laws of life, that which

is at present unexplained, by reconciling the facts of oxygen being absorbed, and of its presence in the blood being indicated by the effects, and yet incapable of being discovered by the examination of arterial blood. It is also entitled to our assent, because, as we shall endeavour to shew in a future part of these observations, it enables us to explain the fact of carbonic acid being occasionally generated in the lungs when there is no supply of oxygen from an external source.

If the idea be gratuitous and imaginary, it is not unsupported by the authority of other physiologists. "The oxygen which the lungs receive is," says Mr. Sumner, "absolutely dead with respect to the system, as much as the food which is introduced into the stomach. It is by the energy of those organs that they are made to receive the participation of life, and to answer the purposes of mellioration and support." "The mere blowing in of air," says Mr. Burns, "neither infallibly excites the action of the lungs, nor does it, as some suppose, change the blood; for this change is an action dependent on life, and cannot be imitated by the chemist more than digestion. Food and air are to be considered in the same light, both only supplying materials for the system to act on, and not themselves acting independently of the animal." The analogous processes of respiration and digestion might here be adverted to in support of our opinions; but this point will be considered with more advantage when the extent of the analogy has been more fully developed. It, may, however, be advisable to state that oxygen is, in our opinion, taken into the system for the express purpose of being converted into a component part of the animal body; and if such be the case, it is obviously absorbed for the express purpose of ultimately participating in the peculiarities of life. It is not, therefore, irrational to suppose, that this peculiarity commences upon its first introduction into the body, at the moment when, by a concurrence of circumstances, we are led to the almost necessary inference, that the characters of its inanimate state are lost.

With respect to the nature of this animal principle we profess to be, in one sense, wholly ignorant; but we cannot be said to be unacquainted with an agent, when we know that certain circumstances are necessary to, and certain effects the results of, its agency. Do

we know more, or indeed so much, of the nature of electricity, or of caloric? and yet with these agents we all consider ourselves to be familiarly acquainted. The principle of gravity is wholly an imaginary power, absolutely unknown to us except by its effects; and yet this imperfect knowledge as to the nature of the attracting power, enables the astronomer to foretell the eclipses of the sun and planets, and the relative position of the heavenly bodies.

With respect to the production of carbonic acid in respiration, when the oxygen has, by its conversion into an animal principle, been deprived of its chemical characters, it is sufficient to say, that we consider the carbonic acid evolved in respiration to be wholly unconnected with the oxygen recently taken into the system, or with any oxygen which can rationally be considered as disobedient to the laws of chemistry.

We are of opinion, therefore, that the whole of the oxygen expended in respiration is united with the blood, and, by the intervention of an animal action, converted into an animal principle, which principle is characterized by the necessity of oxygen and of a living action to its existence and agency; and by the support of living action, in what manner remains to be considered, as its effect.

ROYAL MATERNITY CHARITY.

To the Editor of the London Medical Gazette.

14, New Broad Street, Feb. 18th, 1830.

SIR,

I TAKE the liberty of enclosing for you some particulars of the patients delivered in the Eastern District of the Royal Maternity Charity, under my superintendence, during the last year. You did me the honor of publishing a similar statement in the Gazette of January 31st, 1829.—I am, Sir,

Your obedient servant,

FRANCIS H. RAMSBOTHAM, M.D.

One of the Physician-Men-Midwives to the Royal Maternity Charity; Physician Accoucheur to the Eastern and Tower Hamlets Dispensaries; Lecturer on Midwifery at the London Hospital.

During the year 1829 there were deli-

vered in the Eastern District of the Royal Maternity Charity, under the superintendence of Dr. F. H. Ramsbotham, 2202 women; of which cases—

- 28 were twins; 1 in about every 78½ cases.
- 1156 were males.
- 1074 were females.
- 2142 were presentations of some part of the head; of which
 - 12 were face presentations; 1 in every 178½ cases.
 - 81 were presentations of the breech, or some part of the lower extremities; 1 in about every 27½ cases.
 - 5 were presentations of the shoulder, or some part of the upper extremities; 1 in every 440½ cases; with one of these there was also an adherent placenta.
 - 1 was a complete placental presentation.
 - 8 were complicated with dangerous hæmorrhage before delivery, not the consequence of placental presentations; 1 in every 275½ cases.
 - 15 were complicated with an adherent or retained placenta, requiring removal by the introduction of the hand into the uterus; 1 in about every 147 cases; one of these was a shoulder presentation.
 - 6 were complicated with dangerous hæmorrhage after the expulsion of the placenta; 1 in every 367 cases.
 - 1 was delivered by craniotomy under a small pelvis.
 - 5 were delivered by the long or short forceps; 1 in every 440½ cases; one of these was in consequence of accidental hæmorrhage.
 - 3 were complicated with convulsions; 1 before, 2 after delivery; 1 in every 734 cases.
- In 1 premature labor was induced in consequence of a narrow pelvis.
- 1 second child of twins was delivered by turning, 34 hours after the birth of the first.
- 11 women died; about 1 in every 200.
- 2134 children were born alive.
- 95 were born still; about 1 in every 23½.

Of the Deaths,

- 1 was a few hours after craniotomy; from the combined causes of exhaustion from length of labor and

internal hæmorrhage before delivery. This was her third child. In her two previous labors she had been delivered by the same means; in the second by myself, in the first in the neighbourhood of Cork. I requested her, on my last attendance, to inform me when she became pregnant again, that premature labor might be induced between the 7th and 8th month. This she neglected to do. She had been the subject of ractitis in her childhood, and her constitution seemed quite broken down.

- 3 were the consequence of low fever: one seven days, one twelve days, the other thirty days after delivery. Two of these cases appeared to originate in infection: one that of typhus, the other scarlatina.
- 1 was from confirmed phthisis, a fortnight after delivery.
- 2 were the consequence of accidental hæmorrhage; one immediately after turning, the other soon after delivery by the forceps.
- 1 was an hour after delivery, under a placental presentation.
- 3 were after the removal of an adherent placenta; one on the tenth day, one on the fourteenth, the other five weeks after. In all there had been excessive hæmorrhage.

Of the still-born Children,

- 27 were premature.
- 16 were breech presentations at full time.
- 4 were shoulder presentations.
- 18 were putrid at full time, or nearly so.
- 6 died from accidental hæmorrhage.
- 1 under a placental presentation.
- 1 under puerperal convulsions.
- With 6 the funis presented.
- In 1 craniotomy was performed.
- 1 was hydrocephalic and putrid.
- 14 were head presentations, at full time, or nearly so, not putrid.

CASE OF
IMMOBILITY OF THE JAW,

Successfully treated.

By VALENTINE MOTT, M.D.

Professor of Surgery in Rutgers Medical College,
New York.

DURING the last winter a young man, about 21 years of age, from North Carolina, called upon me with the lower jaw almost immoveably fixed to the upper. There was not the least motion to be discovered in a downward direction, nor was the most powerful effort with the hand upon the chin able in the slightest degree to alter its situation.

He had been in this deplorable state for between ten and eleven years. Unable during that time to chew a mouthful of food, he introduced all the solid aliment which passed into his stomach through an opening on the right side, occasioned by a small aperture from an irregularity of the bicuspid teeth.

On the left side, just within the angle of the mouth, and opposite the situation of the cuspidatus tooth, a very firm band was to be seen and felt, reaching from this point along the alveolar ridge to the coronoid process. It was of more than ligamentous hardness.

Along the whole course of this adhesion of the cheek to the gum of the lower jaw, there was not the vestige of a tooth; and he stated that from this part a large piece of the jaw had been formerly separated, with the teeth attached to it. This morbid adhesion had been several times freely divided, but no depression of the lower jaw could be effected. It was cut from within the mouth in different directions, but never allowed the least motion to the jaw.

From his being able to give a little lateral motion to the lower jaw, I felt encouraged to hope that some relief might be afforded him, and that his mouth, by some powerful efforts, might yet be opened. He consented with great cheerfulness to any operation which I thought could be performed, to enable him to receive food with more satisfaction, and restore the power of speaking, which was also very much impaired. If this could be accomplished, it would, moreover, very much im-

prove his expression generally, as his face had become very much contracted and mis-shapen.

Seated in a chair, I made an incision from the angle of the mouth on the left side, through the cheek, and carried it to near the edge of the coronoid process, dividing the firm cicatrix within completely; then cut the adhesion freely from the upper and lower jaws, so as to relieve the jaws entirely from all restraint from that cause. A piece of very broad tape was now conveyed between the teeth by means of a probe and spatula, and tied some distance below the chin. The head was now firmly held, and with all the force I could exert in the loop of this tape, not the least yielding of the lower jaw could be discovered.

As no force which I could exert would enable me to open the mouth, I was prepared to apply the mechanical principle of the screw and lever. For this purpose we had prepared an instrument composed of two steel plates, about three inches in length. When applied to each other they were of a wedge shape; to the large end was attached a screw, with a broad handle, which, when turned, caused the hind extremity of the plates to expand. (See figure.) This powerful combination of the lever and screw enabled us to open the mouth completely.

With considerable difficulty we succeeded in insinuating this vice between the range of teeth on the left side, being careful to have it rest along their whole course as much as possible. It was then expanded by turning the screw, and such was the report that attended the yielding of the lower jaw, that several exclaimed that the jaw was broken; but to me the noise was like the laceration of ligaments, and not such as attends the fracture of a bone. The mouth was immediately opened to a sufficient extent.

The wound of the cheek was closed with three interrupted sutures, aided with strips of adhesive plaister. From the mouth being kept constantly open for several days, by the instrument secured between the teeth, it occasioned much strain upon the stitches, and made the adhesive strips of material importance.

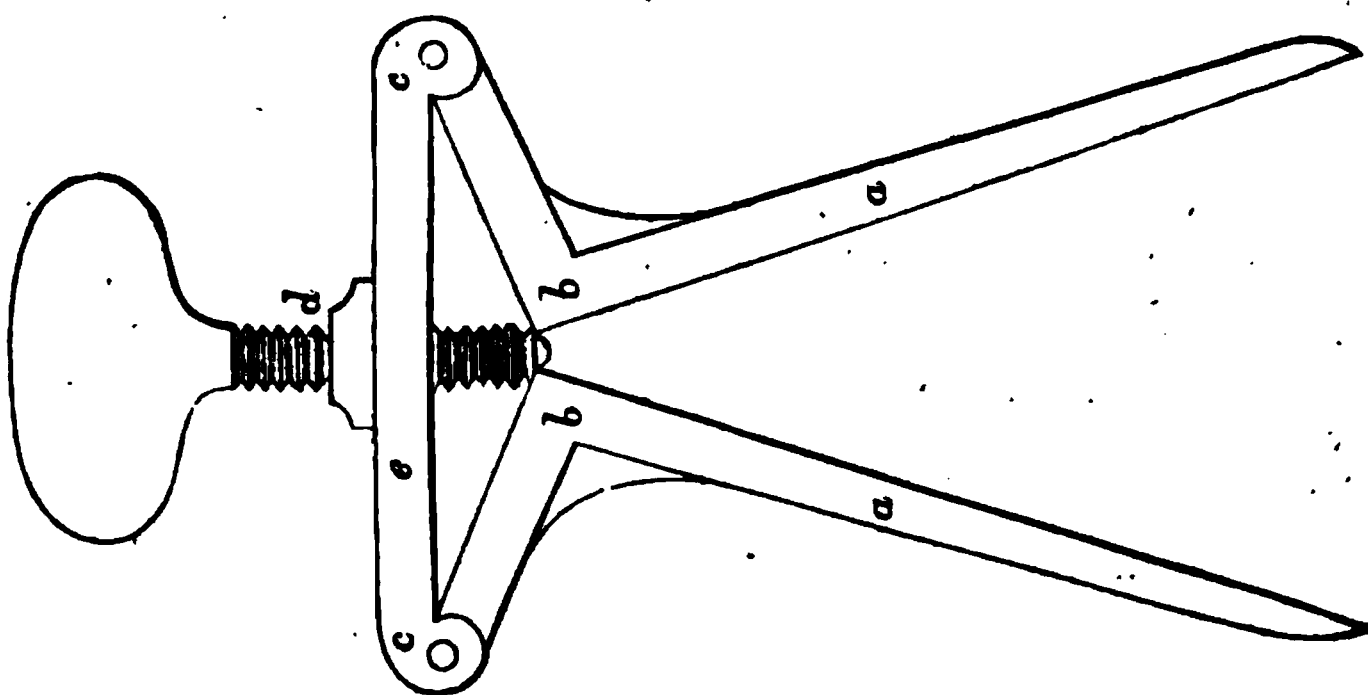
Either the instrument or a soft piece of wood was placed constantly between the jaws, to keep the mouth sufficiently

open until the cheek had healed.—During this time he received his drinks and liquid nourishment from a spoon, or the spout of a tea-pot. When in this way they were conveyed well towards the base of the tongue, he was enabled to swallow without much inconvenience.

As soon as the external wound in the cheek was healed, the instrument was removed, except at night, and occasionally during the day, and he was now permitted to move the lower jaw. To prevent the cheek from adhering to the jaws internally, pieces of sponge were constantly interposed. To enable

the jaws to approximate, it was necessary to remove the last molar tooth of the upper and lower jaw of the left side. Several of the incisors were of the most extraordinary length, and required to be filed off before a proper use could be made of the others.

He gradually acquired the power of closing the jaws, and was greatly delighted with the result of an operation which enabled him to chew his food, and enjoy his meals as other persons, which had given proportion to his features, and the ability to converse and articulate distinctly.



Explanation of the figure.

a a, the two levers bent at right angles, and united to the fulcra *c c* by a joint. *d*, the screw passing through the centre of the bar *e*, and acting upon the angles *b b*, which are notched to receive its point.

New York, 26, Park-Place,
Sept. 1829.

P.S.—Since the above was written, I have successfully operated in a similar case, using the same instrument, upon a gentleman from Louisiana.—*American Journal of Med. Science.*

PROFESSIONAL CHARACTER.

To the Editor of the London Medical Gazette.

SIR,

BEYOND the experience of any former period, the medical profession abounds with men who are an honor to their science and to human nature; while, on the opposite side, it exhibits others who abuse the dignity of manhood, and pervert the noblest uses of the mind. The diffusion of useful knowledge may

117.—v.

enlarge the prospects of the wise, but it also favors the mischievous designs of the worthless; and the means of promoting their several interests is furnished alike to the good and the bad. Subtleties of thought are continually increased and refined with the increasing complication of public and private affairs; nor is it wonderful that, in the present enlightened age, mankind should still patronize and submit to the impositions of those who may have craftily gained their esteem: for if, from the many whose judgments are corrupted by vicious pursuits, rendered low and

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sordid by sensual indulgence, and stupidly narrow from a native dearth of imagination and intelligence, we deduct the few who are virtuously fond of knowledge and intellectual improvement, as well as the higher attainments of a capacious understanding; we need not be surprised that the hypocrite should obtain, from the empty suffrages of the world, the substantial benefits of wealth and profitable notoriety. These observations have had their rise from the last number of your Gazette, in which you prominently animadvert on the irrational opinions of charlatanism, and justly reprobate the parade of ignorance, or deceit*: and the following lines, if they be not irrelevant from the principles and object of your pamphlet, are submitted, with some timidity, for your notice and publication.

The nature and workings of the mind afford the subject of a pleasing and instructive study. Every man, during his daily employments, must have observed and felt those varieties of temper and habit, which so clearly evince the internal worth or folly of their possessor. Hence the characters of medical practitioners, in their various departments, become the medium of ascertaining the truth or fallacy of the healing art, by a candid investigation of their actions, their acquirements, and the mode of their success; the science and the practice of medicine being inseparable, and the real value of knowledge being tested only by the utility of its application. In exemplification of these remarks, therefore, we will, for a while, turn from the closet to the world, and, if possible, with the searching glance of the devil Asmodeo†, sketch from the passing crowd before us, the opposite characters of passive diligence and efficient audacity.

Integrity, displayed by a happy progression of action and success, reputation and distinction is the ultimate object of all that is great and good; but there must be some who will be un-

known, because they are concealed by penury or disaster, and some who will be successful without industry, and honored without desert—since poverty is often considered as a fault, and folly is sometimes mistaken for wit, and conceit for wisdom. Genius and worth may be obscured by an eccentricity of habit; and the mind the best adapted for reason and research, may be dormant in the hour of need, or inapplicable from the want of practical dexterity; while the surest abilities may gradually degenerate into imbecility, if they are too long withheld from being developed by their own peculiar actions. Melancholy may depress a mind too eager for success; and the abhorrence of censure, combined with the apprehension of inability, may emasculate a mind too proud and sensitive from solitude and study. These men are weak without intellectual impotence, and inefficient without any ignorance of their art. Yet we regard with complacency, perhaps with fondness, those failings which proceed from natural infirmity, when they are allotted to a man of an amiable and upright character; and during the bustle and the care of life, we experience something like repose, from the consciousness that others are burthened with troubles similar to our own, and that the conduct of the best is yet deficient and imperfect. The same measure of benevolence, however, cannot be conceded to him who is arrogantly excellent only in his own opinion; and we silently condemn the medical practitioner who estimates his own reputation by the unusual distance of his visits, the appropriate elegance of his equipage, and the wealthy circumstances of his numerous patients. The speed of his horses is overcome with toil; the progress of disease is arrested at his presence. Without leisure for reflection, or desire for further improvement, the daily routine of business is urged with unremitting ardor; ignorance becomes the source of confidence, and confidence the means of success; till, by the sarcastic favor of fortune, prosperity at length brightens the vacant forehead of an upstart fool. But as we dwell not with affection upon the consideration of these men, we turn with gladness to a fairer prospect of those who have associated rank with talent, industry with learning, and wealth with probity; and I am here tempted to delineate the ideal picture of

* See Medical Gazette, leading article, for Feb. 6th ult.

† The Devil upon two Sticks, who seems to have had some sort of insight into the secrets of the heart, had no very great opinion of medical men; for, among those whom he exhibited to the student Cleofas, from the heights of Madrid, one was an apothecary, compounding a philtre for an old debauchee; a second was a physician huddling on his clothes at midnight, to go and see a rich but capricious patient; and a third, a renegade surgeon, who readily bartered for gold the very person whom he had undertaken to assist in his escape from slavery.

a perfect character, whose imaginary excellence should combine the unusual powers of intellect and attainment, with the amiable ascendant of a love of truth.

The understanding, suitable to the completion of a so pleasing an object, must be exercised in difficulty and trouble. It would be scarcely possible, under the most careful tuition, to frame a hardy and vigorous temperament of thought during the soft colligation of affluence and ease; for he who would prolong the evening brightness of declining life must have early experienced the chilliness of want, as well as the prolific necessity of youthful exertions. He must have learned that the business of the world is tedious and imperative; that the prosecution of no design is to be abandoned because it may have ceased to be pleasing; and that in the ultimate accomplishment of every labor the wish for something more will always remain to fill up the measure of his wants. He must ingenuously confess the feebleness of his best endeavours; and, without regarding the applause of mankind, inflexibly resolve to be, in the language used to the Patriarch of old, his own "exceeding great reward." The mind of such a man would be clear and discerning, and his judgment becoming evermore matured by close observation and strict experiment; in his intercourse with the world he would be "silent and modest, sagacious and upright." His prompt decision would palliate or subdue disease; his warm affections would cheer and animate the couch of sickness; his tender sympathy would alleviate the pressure of affliction; and his simple honesty would at once command both confidence and respect. Outward honors would be received with humility; and, as wealth would be acceptable only because it would extend the sphere of his virtuous actions, the season of his prosperity* would become the grateful season for a larger exercise of his skill and goodness. In the various conditions of his fortune, an uniform principle of conduct would be perceived; the same individual would be recognised as he advanced from the private retire-

* And so it was observed of the Emperor Theodosius the Great, who "deserved the singular commendation, that his virtues always seemed to expand with his fortune: the season of his prosperity was that of his moderation."—*Gibbon's Rome*, c. xxxvii.

ment of youth to the active publicity of manhood; manhood would produce, through toil, and care, and vexation, the golden experience of a riper age; and, at last, after publishing to the world the final result of his labors and medical pursuits, he might rightly claim the merit of wisdom, and close his days in peace and honorable distinction. If the infirmity of human nature could be restored to its original integrity; if it were possible, after the eradication of every tendency to vice, still to retain each virtue in its original purity—such a mind, and such a person, might be discovered in the passage of life.

It is one step towards perfection if we learn to know in what perfection itself consists; and, truly, it were something almost divine to exalt the mind as much as possible above the subjugation of passion and appetite, of occasional dulness and natural infirmity. In every situation, however difficult, or however humble, this endeavour cannot but be honest, and must be laudable; and a just emulation of soul is most admirably displayed by uniting the painful duties of a medical attendant with the engaging tenderness of familiar society against all the provocations of malice, the mortifications of distrust, and the fleeting frowns of temporary adversity. Moreover, this mode of thought and action supplies to its possessor both confidence and hope under all those failures which necessarily happen to ourselves as human beings; it yields the copious source of internal happiness, perhaps of public advancement; and produces that intrinsic worth of personal merit; which, independent of all outward forms and circumstances, can alone ennoble indigence and enlighten obscurity.

MEDICULUS.

Feb. 11, 1830.

ANALYSES & NOTICES OF BOOKS.

"L'Auteur se tne à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Researches principally relative to the Morbid and Curative Effects of Loss of Blood; by MARSHAL HALL, M.D. F.R.S.E. &c. &c.

AN excellent paper on some of the morbid consequences produced by loss

of blood, was published by Dr. Hall, in the Med. Chir. Trans., in 1820; and the volume before us shews with what zeal and acuteness he has pursued the subject since that period.

The present work is divided into two parts—"The *Morbid and Curative Effects of Loss of Blood*;" the former is again subdivided into its immediate and more remote consequences.

The immediate consequences are syncope, from its slightest to its fatal form, delirium, convulsions, and coma. The remote consequences comprise the states of excessive reaction, of gradual failure of the vital powers, and of more rapid or sudden sinking, or dissolution.

The writer observes, that the former effects are comparatively well known; but that no author has described with accuracy the secondary or remote effects, a perfect knowledge of which, to the physician, must be incalculable; especially when we consider how frequently reaction, from loss of blood, suggests the idea of increased power and energy of the system, and how much sometimes the state of actual but protracted sinking resembles oppression of the brain, or congestion of the lungs.

The different morbid effects of loss of blood are described under separate heads, commencing with syncope. After describing syncope in its ordinary as well as more aggravated forms, Dr. Hall observes,—“In cases of fatal hæmorrhagy there are none of these ameliorations. The symptoms gradually and progressively assume a more and more frightful aspect: the countenance does not improve, but becomes more and more pale and sunk; the consciousness sometimes remains until at last there is some delirium; but every thing denotes an impaired state of the energies of the brain; the breathing becomes stertorous, and at length affected by terrible gasping; there may be no efforts to vomit; the pulse is extremely feeble, or even imperceptible; the animal heat fails, and the extremities become colder and colder in spite of every kind of external warmth; the voice may be strong, and there are constant restlessness and jactitation; at length the strength fails, and the patient sinks, gasps, and expires.”

Convulsion is next after syncope the most familiar of the immediate effects of loss of blood, and obviously arises from irritation of the brain, and obstruction of the circulation.

may be similarly implicated in opposite states of the system. Not only the voluntary muscles, but those of the respiratory system are affected; and in this manner a condition resembling croop is sometimes induced. Convulsions occurring after bleeding must generally be considered as denoting that the remedy has been used beyond what is consistent with safety.

Delirium occurs as an immediate, and mania as a more remote, effect of loss of blood. Dr. Hall has not preserved any notes of cases of coma in adults succeeding to loss of blood, but makes a quotation from Mr. C. Bell's "Surgical Observations;" and his views on this subject are strengthened by some remarks of Dr. Abercrombie.

Of the more remote Effects of Loss of Blood, or Exhaustion.—"The reaction or recovery from ordinary syncope is generally a simple return to a healthy state of the functions, or nearly so, the pulse not passing beyond its natural frequency. In cases of profuse loss of blood, on the contrary, the recovery is not quite so uniform, and the pulse acquires and retains a morbid frequency for a certain length of time; this frequency of the pulse may gradually subside, however, and be unattended by any other symptom of indisposition of any consequence.

"The phenomena are very different, if, instead of one full bleeding to syncope, or of a profuse hæmorrhagy, and even protracted syncope, the person be subjected to repeated blood-lettings or to a continued drain. In this case, within certain limits, the pulse, instead of being slow and feeble, acquires a morbid frequency and a throbbing beat, and there are, in some instances, all the symptoms of excessive reaction.

"This state of excessive reaction is formed gradually, and consists, at first, in forcible beating of the pulse, of the carotids, and of the heart, accompanied by a sense of throbbing in the head, of palpitation of the heart, and eventually, perhaps, of beating or throbbing in the scrobiculus cordis, and in the course of the aorta. This state of reaction is augmented occasionally by a turbulent dream, mental agitation, or bodily exertion. At other times it is modified by a temporary faintness or syncope. There is also sometimes irregularity of the heart and of the pulse.

more exquisite cases of exhaustion in the symptoms of excessive reaction.

more strongly marked, and demand a fuller description.

“The beating of the temples is at length accompanied by a throbbing pain of the head, and the energies and sensibilities of the brain are morbidly augmented; sometimes there is intolerance of light, but still more frequently intolerance of noise and of disturbance of any kind, requiring stillness to be strictly enjoined, the knockers to be tied, and straw to be strewed along the pavement; the sleep is agitated and disturbed by fearful dreams, and the patient is liable to awake or to be awoke in a state of great hurry of mind, sometimes almost approaching to delirium; sometimes there is slight delirium, and occasionally even continued delirium; more frequently there are great noises in the head, as of singing, of crackers, of a storm, or of a cataract; in some instances there are flashes of light; sometimes there is a sense of great pressure or tightness in one part or round the head, as if the skull were pressed by an iron nail, or bound by an iron hoop.

“The action of the heart and arteries is morbidly increased, and there are great palpitation and visible throbbings of the carotids, and sometimes even of the abdominal aorta, augmented to a still greater degree by every cause of hurry of mind or exertion of the body, by sudden noises, or hurried dreams or wakings; the patient is often greatly alarmed and impressed with the feeling of approaching dissolution; the state of palpitation and throbbing are apt to be changed, at different times, to a feeling of syncope; the effect of sleep is in some instances very extraordinary, sometimes palpitation, at other times a degree of syncope, or an overwhelming feeling of dissolution; the pulse varies from 100 to 120 or 130, and is attended with a forcible jerk or bounding of the artery.

“The respiration is apt to be frequent and hurried, and attended with alternate panting and sighing; the movement of expiration is sometimes obviously and singularly blended with a movement communicated by the heat of the heart; the patient requires the smelling-bottle, the fan, and the fresh air.

“The skin is sometimes hot; and there are frequently general hurry and restlessness.

“In this state of exhaustion, sudden dissolution has sometimes been the immediate consequence of muscular effort on the part of the patient, or of his being too suddenly raised from the recumbent into the erect position.”

Exhaustion, or defective Reaction.—“The phenomena of excessive reaction are most observed in young persons of a robust constitution, who have been subjected to repeated blood-letting. In infants, in feeble persons, and in rather advanced years, reaction after loss of blood is apt to be defective. In this case the patient remains long pale, thin, and feeble, and becomes faint on the slightest occasions; there are deafness and dozing, from which the patient is apt to be startled by sudden loud noises; the pulse is frequent, but feeble, and perhaps irregular, and we shall look in vain for the throbbing and palpitation observed in the young and robust. This state either gradually yields to returning strength, or subsides into the state of sinking.”

The term exhaustion with sinking, is not used to express a state of negative weakness, which may continue long and terminate in eventual recovery; but to denote a state of positive and progressive failure of the vital powers, attended by its peculiar effects and set of phenomena very different from those of exhaustion with reaction.

“If in the latter the energies of the system were augmented, in the former the functions of the brain, the lungs, and the heart, are singularly impaired. The sensibilities of the brain subside, and the patient is no longer affected by noises as before; there is, on the contrary, a tendency to dozing, and gradually some of those effects on the muscular system which denote a diminished sensibility of the brain supervene, as snoring, stertor, blowing up of the cheeks in breathing, &c.: instead of the hurry and alarm on awakening, as observed in the case of excessive reaction, the patient in the state of sinking, requires a moment to recollect himself and recover his consciousness, is perhaps affected with slight delirium, and he is apt to forget the circumstances of his situation, and, inattentive to the objects around him, to fall again into a state of dozing.

“Not less remarkable is the effect of the state of exhaustion with sinking on the function of the lungs; indeed, the very

first indication of this state is, I believe, to be found in the supervention of a crepitus in the respiration, only to be heard at first on the most attentive listening; this crepitus gradually becomes more audible, and passes into slight rattling, heard in the situation of the bronchia and trachea; there is also a degree of labor or oppression, sighing, hurry, blowing, in the breathing, inducing acuteness in the nostrils, which are dilated below, and drawn in above the lobes at each inspiration; in some cases there is, besides, a peculiar catching, laryngeal cough, which is especially apt to come on during sleep, and awakes or imperfectly awakes the patient.

"The heart has, at the same time, lost its violent beat and palpitation, and the pulse and arteries their bounding or throbbing.

"The stomach and bowels become disordered, and flatulent, and tympanitic, and the command over the sphincters is impaired.

"The last stage of sinking is denoted by a pale and sunk countenance, inquietude, jactitation, delirium, and coldness of the extremities."

A very interesting case here is related, with the post mortem examination, and the author thus continues:—

"It would, perhaps, be difficult to offer any observations on the nature and cause of excessive reaction; but it is plain that the state of sinking involves a greatly impaired state of the functions of all the vital organs, and especially of the brain, from defective stimulus. The tendency to dozing, the snoring and stertor, the imperfect respiration, the impaired action of the sphincters, the defective action of the lungs, and the accumulation of the secretions of the bronchia, the feeble and hurried beat of the heart and pulse, the disordered state of the secretions of the stomach and bowels, and the evolution of flatus, all denote an impaired condition of the nervous energy. The state of sinking may, indeed, in certain points of view, be compared with the state of the functions in apoplexy; and to the effects observed on abstracting the influence of the brain and spinal cord by dividing the eighth pair of nerves, or by destroying the lower portion of the cord."

Speaking of the sinking state generally, M. Andral confirms in a singular manner (as he uses almost the same

terms) the remark of Dr. Hall, made so long before, in regard to sinking from loss of blood and other causes.

Dr. Hall observes that the symptoms of exhaustion, with re-action, have frequently been mistaken for those of inflammation of the head or heart, and that, under this impression, resource has been had to the further detraction of blood by the lancet. The effect of this practice is greatly to deceive the inexperienced. It was some time before he could comprehend how the symptoms were relieved by further blood-letting. At length he perceived that the relief proceeded from syncope, but returned as this gave way to the rallying and reaction of the vital powers. We regret, with Dr. Hall, that there is no series of observations on the effects of loss of blood on the internal organs, but these could only be supplied by fatal cases. He observes that it is evident, from the experiments of Drs. Seeds and Kelly, that effusion into the ventricles of the brain is not an unfrequent effect of extreme cases of vascular exhaustion; and in the case related by Dr. Denmark of a patient who died of flooding, four ounces of blood were found in the ventricles.

Speaking of the condition of the lungs under the influence of excessive loss of blood, Dr. Hall compares this state to that observed in dividing the eighth pair of nerves, or of otherwise abstracting the nervous energy: still there is a difference; for instead of hepatization with destruction of the lungs there is a clogged condition of the bronchia. He states—

"There is a remarkable similarity between the effects of loss of blood, and the state of bloodlessness which obtains in chlorosis. The general symptoms;—the tendency to affections of the head resembling arachnitis, and to affections of the heart resembling organic affections of this organ;—the condition of the general surface, and of the capillary and larger circulations;—the proneness to œdema and serous effusions generally, are, indeed, identical in both these conditions.

"These two affections not only agree in the many particulars enumerated, but also in two others of great interest: first, in their tendency, in their last stages, to induce effusion into the cavities of the brain, pleura, pericardium, and peritoneum; and secondly, in their

involving a danger of issuing in the state of sinking, or even of sudden death.

"From both these circumstances it is plain that the capillary and the general circulation are alike in a very analogous condition in these two morbid states; and from both these circumstances the morbid anatomy is found to be very similar.

"The differences which do exist between these two morbid states, arise from the different modes of their accession, loss of blood being a simple event, while the bloodlessness of chlorosis is the gradual effect of a previous state of complicated disorder. In the former, as there are none of the peculiar appearances of the tongue and internal mouth observed in chlorosis, so there is an absence of some internal changes, especially of the liver, which, as I have observed elsewhere, is very apt to become affected with simple enlargement in cases of protracted disorder of the general health."

We will pass over his very interesting account of an hydrencephaloid affection of infants arising from exhaustion, as we have given rather an extensive review of this part of the work in one of our previous numbers; and our limits compel us to refer to the volume itself for a description of the state of sinking, as well as for a variety of useful and original information. In another number we shall direct attention to some important practical points discussed in the second part of Dr. Hall's interesting work.

MEDICAL GAZETTE.

Saturday, February 27, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

ANATOMICAL BILL.

WE are delighted to find the question of legalizing the practice of anatomy taken up and discussed in the last number of the Quarterly Review. There is now every reason to hope that the ear of the

great will be caught and disabused; the difficulty of bringing the subject fairly before the public being thus in a great measure removed. Those who would never permit themselves to consult the pages of a journal like ours—we being supposed to be a party interested in the results—will not shut their eyes on a leading article in so popular a periodical as the "*Quarterly*." Much of the information which we have been laboring from time to time to communicate in a plain, but professional fashion, our courtly friend manages to convey with his own experienced tact, while he is always sure of finding an audience at his command. A fair hearing is, indeed, all that is immediately desirable,—the intrinsic interest and importance of the subject are alone sufficient to do the rest. But when the barrier of literary fashion is so far removed as to permit the discussion of the proper mode of regulating the schools of anatomy throughout the kingdom, it surely augurs well to the cause of science and humanity, or rather it shews that a certain advance has been made in escaping the trammels of human weakness. The time, we suspect, is not very far distant when we shall look back with surprise on the strong and enduring hold which our national, however amiable, prejudices have had on us. Will we not then take to ourselves some little shame for suffering our *sensible* friends on the continent to have so long the start of us in managing those things? Sooner or later we must follow their example; the sooner, no doubt, the better, and with the better grace.

It is not our intention to offer a commentary or a critique on the excellent article to which we have directed the reader's notice; but, we believe, courtesy will warrant us in setting forth a few passages from this first essay on the anatomical question, proceeding

from one of the ablest of our non-medical contemporaries. The writer, after combatting very successfully many of the stubborn prejudices which are abroad, touching the treatment of the dead, thus meets the *religious* objection which is very frequently proposed:—

“When Mr. Abernethy delivered his Hunterian Oration, at the College of Surgeons, he noticed one objection, which is sometimes uttered by most respectable individuals, that the deaths of dissected persons would be unhallowed by any religious ceremony. It would have been a difficult topic in any other hands than those of this great lecturer; but he answered the scruple by remarking, that the burial service might be read over them *before* dissection, substituting for the passage “we therefore commit his body to the ground,” some expression appropriate to its peculiar destination (as is the custom on the continent), signifying that a knowledge of the internal form of the human body is necessary for the cure of diseases and useful for religious instruction, as disclosing the most wonderful examples of divine wisdom and power; that, as this knowledge can be gained only by dissection, and, as in the present case, dissection can give pain neither to the body (for it is senseless) nor to relations, for there are none to grieve over it; for these reasons, that it is consigned to the inquiries of the learned, which would otherwise have been food for worms.” The writer then continues:

“If religious rites were read over the body about to be dissected, and the bodies of murderers, instead of being dissected, were treated like those of suicides, it would tend more than any thing to break that unfortunate association which has been produced by condemning the bodies of murderers only to be anatomized. It is the unanimous opinion of medical men, that nothing contributes so much to keep

up the popular antipathy to dissection as this last practice; and that nothing would assist so much to remove this antipathy as the abolition of it. Several of those who have spoken in parliament on the subject, have, however, declared that they will never consent to its abolition. We are sorry for this; but though our legislators have the power, of course, of maintaining this law, we apprehend they have no power to compel medical men to execute it; and we venture to suggest to all those who value their characters as gentlemen, and members of a scientific and honorable profession, that it rests with them to decline a task which requires them to become *post-mortem* executioners, and actually places them on a level with the hangman. Let Jack Ketch finish the business which he has begun, and take to himself the office of anatomical executioner.”

The gentlemanly and professional feeling here alluded to, we have lately, with much regret, seen outraged in the sister kingdom. No less than four murderers were executed in Dublin within the last two months, and their bodies were accepted as a boon by the school of surgery in that city. Were there a scarcity of subjects there, or were there any novel or important theory to be tried by the test of experiment on the very recent dead body, some excuse might be pleaded; but considering that the price of subjects in the Irish capital is not above a fifteenth part of what it is in London, and that nothing further than mere practice to the galvanist, and amusement to the spectators, seems either to have been intended or effected, we cannot but note the occurrence in strong terms of reprobation*.

* It will be seen by the report, which we published in our last Number, of the electrization of the last pair of murderers, that no new facts have been elicited. The question of the muscularity of the iris we consider as still undecided, in consequence of the contrary results obtained in the course of those experiments.

As we selected the former passage for example and reproof sake, we shall now select another for the sake of the instruction which it is likely to afford in certain quarters. The reviewer writes professedly for the information of our legislators, and of the literary and non-medical public; and we must do him the justice to say that we conceive his materials to be so well chosen, and his arguments so clear and cogent, that those who read cannot but understand and be convinced by them. How much were it to be wished that the subject were more generally addressed to public notice through the medium of the literary periodicals. The influence of the press could not be more worthily employed. Our popular writers, however, had no doubt long since taken it up were they aware of how much interest the discussion of the question, and the development of its circumstances, are susceptible, and were the public at large at all impressed with an adequate sense of how much *they* are concerned; for, in other respects, we medical men, practitioners especially, take on us but too much an air of officiousness, almost to the forgetting that the more unprosperous arrangements of legislative interference in this business, were rather beneficial than otherwise for us. It is surely not improper to assume some little credit for disinterestedness, when we find our claims so likely to be contested or overlooked simply for want of being asserted. At present, however, we shall content ourselves with what we have said, and return to the promised extract from our friend of the Quarterly.

“What occasioned the Lords to reject Mr. Warburton's bill after it had passed the House of Commons we have not heard, and could not understand from the debate. It had several faults. The University of Edinburgh protested against it on the ground that it would give the London medical schools such

an advantage over those of Scotland, where the number of unclaimed bodies is very small; (in Edinburgh not a hundred in the course of a year) that they would be deserted by students, unless a clause was introduced, permitting the transfer of bodies from one part of the empire to another—from London, for example, where unclaimed bodies are numerous, and Dublin, where they are still more so—to Edinburgh and Glasgow, where there is a great scarcity. This is very reasonable, and ought to be attended to by the framers of any future bill. But the great objection to Mr. Warburton's was this—it compelled anatomists to bury the body which they had dissected, under a penalty of fifty pounds. This clause was absurd and injurious. Do Mr. Warburton, and the Anatomical Committee who framed the bill, and the House of Commons who praised and passed it—do they know what dissection is? The mere examination of a body to discover the cause of disease consists in opening and then closing it, leaving it so free from disfigurement, that the most heart-stricken mother, if she knew what it was, would not object to an inquiry so useful to humanity. But what a different process is dissection! Dissectors are as thorough workmen as putrefaction and the worms. To trace the fragments of a dissected body, would be something like tracing the atoms of a buried one.

‘To what base uses we may return, Horatio!’

“Those who believe in the resurrection, at the day of judgment, of the identical body which died perhaps centuries before, have been puzzled to explain how the different atoms of which it was composed, which time has converted into worms and mould, and these again into other things, should be collected and cemented into that body which the last trump is to awake. But it would be almost as difficult to

collect the fragments of a dissected body for burial: the utmost care could not prevent parts of different bodies being buried as one person; and a list of the fragments jumbled into one coffin would be as curious as the composition of the Witches' cauldron in Macbeth:

'Liver of blaspheming Jew;

Nose of Turk, and Tartar's lips;
Finger of birth-strangled babe,
Ditch-deliver'd by a drab;
Make the gruel thick and slab.'

"If Mr. Warburton mean only that the fragments which remain after the anatomist has done all he wishes to do with the body, should be collected and buried, there could be no objection to that; but as the clause now stands, the anatomist is exposed to a penalty of fifty pounds unless the whole or principal part of the body is buried. Such a provision would effectually prohibit the making of preparations—that is, preserved specimens of dissected parts—one of the most important methods of anatomical instruction; and if it had been in force in times past, no anatomical museums could have been found such as those of the Hunters, at Glasgow, and at the College of Surgeons—which are to anatomists what the Louvre is to painters."

The concluding paragraph places the only alternatives left for the legislature in so conspicuous a point of view, that we cannot resist quoting it, although we have already borrowed pretty freely from our contemporary.

"We have aimed at convincing our legislators that it is of vital importance to the nation that the study of anatomy should not only be tolerated but encouraged, and that there is only one remedy for the existing evil—the use of unclaimed bodies. As to the particular provisions of the future bill (for surely a bill there must be), we have said nothing; but we cannot look at parts of Mr. W.'s without being reminded what an useful addition to the House of Commons would be two or three eminent physicians and surgeons, possessed

of knowledge, clear heads, and sufficiently accustomed to speak, to stand up in their place and correct at once those egregious errors which are at present so sure to be uttered by members whenever medical subjects are introduced, without the house having the smallest suspicion of their absurdity; and which would then be strangled in their first form of speech or remark, and not live to crawl into the provisions of a bill, where they are often mischievous enough to counteract the good it might otherwise have done. In the meantime, to the framers of the bill aided by competent advisers, we leave the details of its provisions, begging them to carry this at least in their minds—that there are only three plans from which to select; one to prohibit the study of anatomy altogether, and cause surgery to relapse into the infancy of the art; another, to support the breed of resurrection men, plunder graves, and after all, supply the nation with half-informed anatomists and unskilful surgeons;—the last is, to give up unclaimed bodies to the schools of anatomy, by which resurrection men would be abolished, the buried lie quietly in their graves, and the nation be supplied with an ample stock of expert anatomists and dextrous surgeons. The legislature and the nation must take their choice; and should they unfortunately select one of the two former, they cannot in reason complain of, and ought not in justice to punish, that professional ignorance which is the inevitable consequence of either of those measures."

COLLEGE OF PHYSICIANS.

Monday, Feb. 22d.

At the meeting on Monday evening, two papers were read, containing answers to a set of questions proposed by the College of Physicians, in reference to the statistics of some of the Islands in the Mediterranean.

Population, Diseases, and State of Medicine, in Malta and the Ionian Isles.

The population of Malta, exclusive of the troops, is a little under 100,000, and the average annual mortality nearly

2½ per cent. There are frequent instances of considerable longevity, several natives having annually died, during the last five years, at the age of 98, and so many as thirty annually at 90. The features of the inhabitants are of European cast, with dark hair and skin; the average stature of the men is about five feet five inches. The thermometrical range is limited; the medium height in summer being about 80, and in winter about 60 of Fahrenheit. The soil is chiefly chalk, clay, and marl. The diseases which prevail are diarrhoea, dysentery, dropsy, apoplexy, and fever. Marasmus and teething prove fatal among children; disease in general is most prevalent in autumn. During the winter, tetanus is not uncommon among blacksmiths and bakers, almost always proving fatal.

Most of the native practitioners receive their education in Italy, some in France, a very few in England; and disease is treated according to the precepts of the schools, there being nothing remarkable either in their remedies or modes of using them. Vaccination is in general use, the lymph being procured from England and Italy—chiefly from the latter. During the last few years, however, a Medical School has been established in Malta, in which lectures are given in the various branches of the science, and degrees granted; the ordinary period allotted to professional study is four years.

The Italian and French modes of living are adopted by those in easy circumstances, while the lower classes live poorly, but indulge, as far as their means go, in garlic, oil, spirits, and tobacco.

With regard to the Ionian Isles, from 2 to 3 per cent. may be stated as the average rate of mortality, except as regards Cefalonia, where it amounts to 8 in 100. Some remarkable instances of longevity have been observed, especially in Santa Maura, where one person lately died at the age of 112, and another now lives who has reached 106; while at Ithaca one or two have arrived at 110. July, August, and September, are the months during which disease is most prevalent. In spring, intermittent and inflammatory fevers are common; in summer and autumn, intermittents and remittents, with diarrhoea and dysentery; in winter, inflammations. The greater number of those

who practise medicine have been educated in Italy. Surgery is not so much cultivated, and many of the operations which are required are performed by empirics from the coast of Epirus, who are more dextrous and successful than could have been expected, employing methods peculiar to themselves, and instruments of their own invention.

Vaccination is generally practised in these islands, lymph being obtained from Corfu.

EXTRACTS FROM JOURNALS,

Foreign and Domestic.

EMPHYSEMA OF THE EYELIDS.

A young man, aged 25, struck his nose against a post; the integument remained unbroken, and there was but little pain or bruising. Two hours after, while making an effort to blow his nose, he felt a kind of vapor rise along the left side of the nose, and mount rapidly up the angle of the eye, thence spreading over the eyelids. These became so much swollen as completely to interrupt vision. The patient being frightened, immediately came to the Hotel Dieu, where the affection was recognised as an infiltration of air into the cellular texture of the parts about the eye. He was bled from the arm, and compresses dipt in goulard water applied to the eye. He was quite well on the third day. Nothing was discovered on the most careful examination of the nose.

This singular affection depended, in all probability, on a laceration of the pituitary membrane, opposite the union of the lateral cartilage of the nose, which had become detached at the inferior edge of the nasal bones, by the violence of the blow.

Emphysema, as a consequence of a lesion of one of the most elevated points of the respiratory passages, has sometimes given rise to very singular and embarrassing phenomena. The following case was related by M. Dupuytren:—A man fell on his forehead: some time after a tumor of rather large size made its appearance in the region of the temple; its characters were not easily determined—when M. Dupuytren gently compressing it, and making it pass towards the anterior part of the

forehead, it entirely disappeared. It had depended upon air passing into the surrounding cellular texture, from a fracture at the frontal sinus.

Works on surgery do not mention such cases of emphysema; but Dr. Meniere has quoted two instances of this kind in the *Archives Generales de Medecine* for March 1829.

In the first of these, a woman, aged 26 years, received a violent blow with the fist, at the inner angle of the left eye, and during some efforts which she made to blow her nose, she experienced a sudden swelling of the eyelids. This swelling, which disappeared under the use of compresses dipped in cold lotion, always came on again every time she blew her nose. A continuance of the former, and prohibiting the latter, produced a permanent cure.

The second case is that of a patient brought to the Hotel Dieu in 1826, in a state of insensibility. He only breathed through the nose, and the mouth was shut: to make him open this, his nose was pinched. A violent expiration was the result—the left eyelid was a little raised. The experiment was repeated, and the tumefaction increased. The patient died next day. There was a small bruised spot on the eyelid, and on examination after death a fracture of the orbit was found, extending into the ethmoid cells.—*La Lancette*.

USE OF KINO IN DIARRHŒA.

M. Bally has lately made an extensive trial of kino in cases of diarrhœa at La Pitié. The simplest cases were those of chronic purging, without pain, colic, or other complication than a gradual diminution of the strength, unaccompanied by fever. Four or five days perseverance in the kino, to the extent of from twelve to twenty grains, were sufficient to arrest the disease when it had not been present more than two or three months; if it had been of longer duration, the treatment required was more protracted, but almost always efficacious. In one case a diarrhœa of three years standing was cured by the kino.

But it is not merely in cases such as the above that the remedy has proved of service—in others, where there was violent pain and even tenderness on pressure, with fever, twelve or fourteen grains of kino, given three, four, or five days successively, have proved

sufficient to effect a cure.—*Gazette de Santé*.

TENIA FOUND IN WATER.

The statement of Linnæus that he had found the tonia in water, has been generally doubted. MM. Baer and Eysenhardt, however, have confirmed the observation. At a spot near the embouchiere of the Pregel, two leagues from Königsberg, the water was filled with specimens of the *botriocephalus solidus*, four of which they procured alive. It is proper to add, however, that at the same place were found a number of little fish, most of which had an unusual swelling of the belly, from which, on being pressed, a worm of the above kind escaped, and which continued to live in water two days after its expulsion.—*Verhandlungen der Gesellschaft naturforsch.*

TEST OF CASTOR.

To ascertain if tincture of castor has been prepared from the Canadian or Russian drug, it is only required to pour some drops into distilled water. A milky mixture results. The addition of ammonia renders this clear and completely colorless, if the tincture has been made with Russian castor; but it remains turbid, if the American castor has been used.—*Mag. für Pharmacie*.

DISTEMPER AND RABIES.

In an interesting paper "On the Distemper of Dogs," by Mr. Youatt, the following points of distinction between that disease and rabies are particularly mentioned:—

"Occasionally, however, the inflammation of the conjunctiva is exceedingly intense, and the membrane is vividly red, and the eye impatient of light. An opacity spreads over the cornea, and this is quickly succeeded by ulceration. The first spot of ulceration is generally found precisely in the centre of the cornea, and is perfectly circular: this will distinguish it from a scratch or other injury. The ulcer widens and deepens, and sometimes eats through the cornea, and the aqueous humor escapes. Fungous granulations spring from it, and protrude through the lids; and the animal evidently suffers extreme torture. A remarkable peculiarity attends this affection of the eye. However violent may be the inflammation, and whatever disorganization it

may produce, if we can cure the distemper, the granulations will disappear, the ulcer will heal, the opacity will clear away, and the eye will not eventually suffer in the slightest degree. One-fourth part of the mischief in other cases, and unconnected with distemper, would inevitably terminate in blindness; but permanent blindness is rarely or never the consequence of distemper.

"It may not be improper here to glance at the different appearance of the eye in rabies. In the early stage of rabies there is an unnatural and often terrific brightness of the eye. The cornea in distemper is from the first rather clouded. In rabies there is frequent strabismus, with the axes distorted outward. The apparent squinting of the eye in distemper is caused by the protrusion, probably unequal protrusion, of the membrana nictitans over a portion of the eye at the inner canthus, to protect it from the light. Finally, in rabies there is not the white cloudiness which I have described, and the occasional ulceration with very little cloudiness, and the ulceration confined to the cornea; but a dense, green opacity comes on, speedily followed by disorganization and ulceration of every part of the eye.

"When a person unacquainted with dogs sees one of those animals struggling in a fit, or running along unconscious of every surrounding object, or snapping at every thing in his way, whether it be a human being or a stone, he raises the cry of 'mad dog,' and the poor brute is immediately sacrificed. The very existence of a fit is proof positive that the dog is not mad. No epilepsy accompanies rabies in any stage of that disease.

"The distemper is clearly a disease of the mucous membranes, usually commencing in the membrane of the nose, and resembling nasal catarrh. In the early stage it is *coryza*, or nasal catarrh; but the affection rapidly extends, and seems to attack the mucous membranes generally—determined to some particular one, either by atmospheric influence or accidental cause, or constitutional predisposition. The fits arise from general disturbance of the system, or from the proximity of the brain to the early seat of inflammation."—*Veterinarian*.

HOSPITAL REPORTS.

LONDON HOSPITAL.

Pericarditis after Rheumatism.

CASE I.—James Robinson, æt. 20, a coal-heaver, was admitted on the 22d October, under the care of Dr. Davies. He states that about three weeks previous to his admission, whilst following his occupation, he fell overboard, and on regaining the vessel, continued to work without changing his wet clothes. In the course of three days he was attacked with severe pains in his joints, increased on the slightest motion, and attended by violent headache, and some dyspnoea, but without any pain in the chest, and without cough or expectoration.

These symptoms continued till the time of his admission, with the exception of the pains in his joints, which were so much abated that he was enabled, with some assistance, to walk to the hospital.

Mist. Colchici. ter die.

Cal. c. Jalap, ℞j. alt. diebus.

25th.—Pains of joints much better; less headache; no cough; some dyspnoea still.

Perstet.

30th.—Pains of joints and headache have almost entirely left him; still some dyspnoea.

Perstet.

Nov. 3d.—Had yesterday a severe attack of pain at the region of the heart, extending to the right side, with strong palpitations and a feeling of oppression across the chest. The slightest exertion increases the pain, and produces a tendency to syncope; there is much dyspnoea, but no cough. On applying the stethoscope to both sides of the chest the respiratory murmur is found to be perfectly distinct. The action of the heart is very rapid, with a rolling vibratory motion; there is some extent of pulsation, but no evident impulsion. The pulse is 150, small and hard.

V. S. ad 3iv.

Emp. Lyttæ. reg. cordis.

Pil. Hydrarg. gr. v. ter die.

7th.—The dyspnoea was immediately relieved by the bleeding; the pain and other symptoms continue much the same.

Rep. Emp. Lyttæ.

Cont. Pil. Hydrarg.

11th.—The dyspnoea has increased since the last report. Complains much of the palpitations of the heart, and the sense of oppression across the chest. Pulse 150, and hard; the mouth is not yet affected by the pill.

V. S. ad 3xij.

Hydrarg. Submur. gr. ij. ter die.

Omitt. Pil. Hydrarg.

14th.—The bleeding produced immediate relief; pain and dyspnœa not so great.

Cont. Hydrarg. Submur.

27th.—Has had ptyalism for the last eight days; the pain at the præcordial region, the feeling of oppression, and the dyspnœa, are much diminished; he complains of pain in the right hypochondrium, which is much increased on making a deep inspiration.

Hirudines, xli. Hypochond. dextro. Emp.

Lyttæ reg. cordis. Omit. Hydr. Submur.

Dec. 1st.—Has no pain in the right hypochondrium; the other symptoms are gradually disappearing.

Rep. Pil. Hydrag. Emp. Lyttæ regioni cordis.

10th.—His mouth is kept sore by the pills; the pain at the region of the heart, and the dyspnœa, are completely gone.

Cont. Pil. Hydrarg.

20th.—Has no pain, or dyspnœa; complains only of occasional palpitations.

Cont. Pil. Hydrarg.

He continued much the same during the month of January, and it was thought unnecessary to make any report.

Feb. 1.—Is gradually getting better; palpitations only supervene on much exertion.

Omit. Pil. Hydrarg.

13th.—He now feels quite well; palpitations occur but seldom. The action of the right ventricle a little stronger than natural, and gives a clear sound.

CASE II.—Thomas Purkes, æt. 14, from the country, was admitted, under the care of Dr. Billing, on the 19th December.

He reports, that during the last spring, he was attacked with rheumatic pains in his arms and legs, which confined him for ten weeks to his bed. On his recovering, he was affected with palpitations of the heart, increased by the least motion, and attended by difficulty of breathing and a tendency to syncope. The heart's impulse can now be felt over the greater part of the anterior thoracic parietes, and is much stronger than natural. The respiration is hurried and laborious, and he complains much of weakness. The lips are slightly livid, but there is no complaint of head-ache or rigors.

Milk diet. Hirudines, x. sterno alt. diebus. Haust. Cath. om. mane.

20th.—Slept well last night; no pain in the chest. On examination, the left side of the thorax appears more prominent than the right. Action of the heart strong and regular, and 98; at the wrist the pulse is soft.

Perstet.

29th.—He feels much better to-day.

Pil. Hydr. noct. maneque.

Jan. 6th.—Feels much better; lips now natural in color; pulse 96, and soft; bowels open.

9th.—Feels much better; pulse 100; appetite good; tongue clean; bowels open.

Feb. 6th.—Has continued improving until to-day, when his cough has become more troublesome. The lips are again livid; the heart's action is now very violent; pulse 120, and weak; bowels open.

Setaceum reg. cordis. V. S. ad 3x.

15th.—The heart continues to act violently, and with much noise; the lips are very livid, and the countenance expresses great anxiety.

16th.—He died at one P.M.

Post-mortem Examination.—Thorax: on opening the chest, the pericardium was seen extending from the diaphragm to the second intercostal space, and occupying a large portion of the thoracic cavity. The lungs were sound, and in consequence of the space taken up by the pericardium, were compressed and confined to the upper and posterior part of the chest; and about two pints and a half of straw-coloured serum were sponged out of this cavity. On cutting open the pericardium, the heart was found surrounded by a fluid similar to that which was removed from the thorax, and in quantity about three pints. The whole surface of the heart was covered by coagulable lymph, arranged in the same peculiar manner as olive oil, when in a congealed state. The internal surface of the pericardium presented the same appearance, and from it the lymph could be removed in patches of considerable thickness. The left ventricle was hypertrophied; the other parts of the organ appeared natural.

Abdomen:—A small quantity of serum was removed from this cavity. The stomach and intestinal canal were healthy; the liver was a little enlarged, firmer than usual, and of a very dark color; and cutting into it, it was found gorged with blood, which freely followed each incision. The spleen and pancreas felt firmer than natural.

The head was not examined.

CASE III.—John Simpson, æt. 20, came into the hospital on the 6th of January, under the care of Dr. Gordon, complaining of great pain in the region of the heart, of intense head-ache, pain of loins, and difficulty of breathing. He states, that he had been the subject of rheumatism about four years ago, and that he has since, at intervals, suffered much from palpitations and pain in the region of the heart. The heart's impulse is now felt over the greater part of the anterior thoracic parietes; the pulsation of the jugular veins is evident, and the

stethoscope indicates a purring noise when applied over the situation of the left ventricle. He is nearly comatose, and lies with his chest inclined forwards and resting on the bed, which position gives him the greatest degree of ease. Countenance is pale; sight dim; feet cold; subsultus tendinum. Pulse 90, and scarcely perceptible.

Cal. c. Jalap. gr. xv. cras mane.

Milk diet.

7th.—Continues much the same; says that he has not slept for the last four nights; pulse 84, full and throbbing; bowels open.

Hirudines xii. reg. cordis.

Tinct. Digit.

Vin. Ipecac. aa. ℥xii. ex

Mist. Salina ter die.

8th.—Feels a little better to-day; less pain of chest and back; no subsultus tendinum; less pulsation of the jugular veins; head-ache continues; he lies in the same posture as mentioned in the report of the 6th; pulse 90 and feeble; bowels open.

Omittr. Mist.

Ext. Hyosc. gr. iij.

Spirit. Æther. Nit. ℥xv. ex

Decoct. Lini ter die.

9th.—He died this morning.

Post-mortem Examination 22 hours after death.—Body regularly formed, and much emaciated.

Thorax.—On opening the chest, the pericardium was found to occupy a space corresponding to nearly the whole sternum and the cartilages of the six superior ribs: it contained about five ounces of bloody serum, and its serous coat, as also that of the heart, were covered with coagulable lymph, presenting an appearance similar to the internal surface of the calf's stomach, and they were connected by delicate albuminous bands.

The heart was very large; the right side was healthy; the left ventricle hypertrophied, and more particularly its columnæ carniæ; the ostium of the aorta appeared smaller than natural, the coats of the artery and the valves being perfectly healthy. The other parts of the body, for reasons quite unnecessary to mention, were not examined.

[Next week we shall give one or two other cases illustrating some affections of the heart.]

[The following cases of poisoning are illustrative of the benefits arising from the use of the stomach pump when speedily applied.]

ST. THOMAS'S HOSPITAL.

Poisoning by Supracetate of Lead.

EMMA PALMER, æt. 20, admitted into Ann's ward about half-past 11 o'clock on the night of Feb. the 9th, under the care of Dr. Williams, having taken two pennyworth of

sugar of lead*. The stomach pump was had speedy recourse to, and a solution of sulphate of magnesia thrown into the stomach, and then emptied of its contents until it was thought that all the poison was removed; but it was with some difficulty that this was accomplished, as she very much resisted the introduction of the tube into the mouth. Repeated doses of Epsom salts, in solution, were likewise given after the use of the pump had been discontinued, and she had several vomitings. On the following morning she did not complain of any bad symptoms, and it was a question whether she had actually taken as large a dose as was represented. There was a slight excoriation on the right side of the gums, which presented a white appearance, and she said she had a sensation of heat in her throat; bowels open freely.

11th.—No sensation of heat in the throat; tongue clean; bowels open; pulse 70, natural; says she has pains in the calves of the legs, and on the inner side of the thighs, which made her restless during the night; very thirsty; bowels kept open with house physic and castor oil; milk diet.

13th.—Pains in the legs and thighs much less; tongue clean, with the papillæ raised; no pain or tenderness on pressure over the region of the stomach; the patch of excoriation on the gums lessened in size; still complains of a good deal of thirst.

On the 15th she left the hospital quite well; previous to which time, however, and since last report, she has been taking infusion of roses, with a drachm of sulphate of magnesia, every six hours.

Poisoning by Opium.

James Horsant, æt. 44, (latterly has been addicted to hard drinking) was received into the hospital about six in the evening, on the same day as the foregoing patient, and was placed in Jacob's ward, under the care of Dr. Roots, laboring under symptoms of an overdose of opium, and on searching his person, two phials were found in one of his pockets marked with the name of the drug. The stomach was readily cleansed with warm water, which was injected by means of the stomach pump, and some strong coffee and lemon juice administered afterwards. As there was a great disposition to drowsiness, the patient was kept walking up and down the ward until about two o'clock on the following morning, when the stupifying effects of the poison were in a great measure overcome.

10th.—Complains of pain across the forehead; pupils contracted and fixed; tongue coated yellow; pain and sensation of tightness across the epigastrium; bowels open from house physic; pulse quick and full.

* The retail price in London is about two-pence per ounce.

Ordered to be bled to 12 ounces, and to have a dose of house medicine daily. Milk diet.

11th.—Has had a good night; tongue more clean; pulse quick, but less full; says he has a slight pain in the stomach, which is increased by pressure.

On the 13th we again saw him, when he was quite free from any symptoms of the poison. He remained, however, in the house until the 18th, when he was discharged quite well.

GUY'S HOSPITAL.

Poisoning by Oxalic Acid.

MARY POOLE, æt. 21, admitted into Chapel Ward on the morning of the 2d of February, as a patient of Mr. Morgan's, having swallowed half an ounce of oxalic acid, with an intent to destroy life. She stated at the time of admission, that she had taken the poison about half an hour before, and was soon after seized with vomiting. She complained of a severe pain in the stomach, and a sensation of heat up the throat, with constriction of the fauces. In this case the stomach-pump was also called into aid, and magnesia administered as an antidote. Having visited the patient again towards the afternoon, she still complained of a burning heat in her throat, with tightness of the fauces. Pulse quick and hard, rather small; says she has no pain or tenderness on pressure over the stomach, but has severe headache. She takes the house medicine (which is composed of magnesia with sulphate of magnesia) every six hours. This was directed to be taken after the use of the pump, until the bowels were freely open.

3d.—No pain or tenderness on pressure over the stomach. Yesterday, towards the afternoon, she says she was taken with vomiting, but it soon left her; bowels open; pulse 64, more soft and expanded; slight soreness of throat; no head-ache; tongue slightly coated; no thirst; slept tolerably well during the night. Low diet.

6th.—She says she has no symptoms in particular to complain of, and feels quite well. Continues house medicine occasionally. Discharged on the 16th.

Speaking of poisoning with oxalic acid, Dr. Christison, in his late work, says, "the chief part of the treatment of this kind of poisoning is obvious. On account of its dreadful rapidity, remedies cannot be of material use unless they are resorted to immediately after the acid has been swallowed. Emetics may be given, if vomiting is not already free; but time should never be lost in administering them, if an antidote is at hand. In particular it is necessary to avoid giving warm water with a view to accelerate vomiting; for dilution will promote the entrance of the poison into the blood, if it has not the effect of immediately expelling it.

"The principal object of the practitioner

should be to administer as speedily as possible large doses of magnesia or chalk suspended in water. Chalk has been given with great advantage in several cases, and magnesia has also been of service in the only instance in which it has hitherto been employed. These substances not only neutralize the acid, so as to take away its corrosive power, but likewise render it insoluble, so as to prevent it from entering the blood. There appears no particular reason for using the stomach-pump in this variety of poisoning, when antidotes are at hand. But fashion seems to have authorized the employment of this instrument for every kind of poison. Alkalis which were once used as antidotes are inadmissible, because, as may be inferred from the general statements formerly made on the effect of chemical changes on poisons, the alkalis, as they form only soluble salts, will not deprive oxalic acid of its remote or indirect action."

WAKLEY AND CHABERT.

THE contest still continues between these rival competitors for notoriety. Wakley says (*Lancet* of last Saturday) that Chabert has written to him, requiring "*the satisfaction*" due from one gentleman to another; a demand with which Wakley, knowing his own place in society, naturally feels it impossible for him to comply. Chabert, on the other hand, positively denies (*Times* of Monday) that he either sent or authorized any other to send the challenge which Wakley asserts he has received, and seems annoyed at it being supposed that he should so far have mistaken the station of his rival as to address him in a capacity in which he has never been acknowledged, and to which he very properly does not lay claim. By the way, this leads us to ask the worthy Editor whether he has any suspicion of the quarter whence this pretended challenge came? Could it have been the production of the same person who forged the letter from Mr. Green, which appeared in the *Lancet* some time ago?

ALDERSGATE-STREET SCHOOL.

On Friday, the 19th instant, the teachers, pupils, and gentlemen connected with the Aldersgate-Street School, dined together at the London Coffee-House. Mr. Tyrrel took the chair, and we understand that more than a hundred gentlemen sat down to dinner. The healths of the several lecturers were successively drank, amid much applause, and the compliment thus paid to them acknowledged in neat and appropriate speeches. On Mr. Tyrrel being obliged to leave, Mr. King was called to the chair; and the meeting did not separate till a very late hour, the utmost good feeling and conviviality prevailing throughout.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

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OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 6, 1830.

LECTURES ON SURGERY,
Delivered at St. Bartholomew's Hospital,
BY WILLIAM LAWRENCE, F.R.S.

LECTURE XXIII.

*Venereal Disease—its Divisions; History; and
General Treatment.*

GENTLEMEN, the expressions *syphilis* and *venereal disease* are used indifferently, to denote a train of morbid appearances that arise from infection communicated from a diseased to a healthy person, either in sexual intercourse or in some other direct manner. The latter of these two expressions is the more general, for *venereal disease*, according to the etymology of the word, includes all those complaints that proceed from sexual intercourse. Adopting the expression in the more enlarged sense, we divide venereal diseases into *syphilis* and *gonorrhœa*—two divisions.

Syphilis.

The various appearances which are included in the term *syphilis*, fall under two general divisions—the *primary* and the *secondary* symptoms of the disease.

The *primary* symptoms consist of those which are immediately produced by the application of the poison to the human body—that is, ulceration, and swelling of the glands consequent on this ulceration—primary ulceration and *bubo*—for this is the term technically given to those glandular swellings of the groin which arise from ulceration taking place on the generative organs of either sex. These ulcerations are very commonly called *chancres*, so that when we speak of the primary symptoms of *syphilis*, we say they consist of *chancre* and *bubo*.

The *secondary* symptoms consist of various affections of the skin, of the throat, tonsils, and mouth, of the eye, the nose, the ear, the testicle, the bones, and the joints. These latter are what is called *constitutional venereal disease*, *constitutional*

syphilis, *lues venerea*—in a word, the constitutional form of the disease.

The occurrence of constitutional symptoms is not necessary to constitute *syphilis*; *syphilis* may consist simply in the presence of the primary symptoms I have just mentioned—that is, of ulcers on the generative organs, with or without *bubo*. All such primary affections are not uniformly followed by secondary symptoms. If you take a given number of patients with primary symptoms, whether you employ any treatment for them or not, you will only have secondary symptoms in a certain proportion of cases. This proportion has been differently stated by different observers: some have said that secondary symptoms take place in one out of three; others say that the secondary symptoms do not happen oftener than once in twenty cases of primary disease; but, at all events, you will occasionally have *syphilis*, recognised as such, without any secondary symptoms following.

Now the word *syphilis*, as I have explained it to you, does not denote an affection of any single organ of the body; it is more like the term *scrofula*—it is a general one, under which is included a variety of diseases of various textures and organs of the body.

It is generally supposed that *syphilis* was not known to the ancients, at all events we meet with no clear description of the disease till the end of the 15th century. There are scattered notices of ulcerations occurring on the generative organs, both in old medical writers, and various other authors who flourished before the time that I have mentioned; but we do not find in any of them an account of the disease according to the view which we now take of it ourselves;—and, in particular, we do not find in any instance an account of what we call constitutional symptoms—at all events we do not find a reference to any particular appearances of disease such as what we understand by secondary—that is, having primary symptoms as their source,—we find nothing of this kind in any writings prior to the very end of the 15th century.

Now about that period two remarkable events took place. The first of these was the discovery of what was called the new world by Columbus; who returned from the island of Saint Domingo to Spain in 1493, after discovering the islands of the West Indies;—the other event to which I have alluded was the invasion and conquest of Naples by Charles VIII. king of France, who entered that city in the year 1495. Now the origin of syphilis has commonly been referred to one or other of these two events. Many have believed that syphilis was a disease originally epidemic in the West Indies, in the part that was first discovered by Columbus—the island of Hayti; that it was brought to Europe by the companions and followers of that navigator, and was thence disseminated over this part of the world. For my part, I can see no direct evidence—in fact, no evidence at all, that syphilis existed in the island at the time that Columbus discovered it; certainly no account of any such affection is given in the original narrative of the expedition of Columbus, nor in the earliest accounts published of what was seen and observed there; and the idea of the origin of the venereal disease in the West Indies, in the way that I have mentioned, is first suggested by writers who went to Saint Domingo some time after it was visited by Columbus.

Farther—we find, on examining the historical evidence upon this subject, that there are unequivocal traces of the existence of the venereal disease in Europe some years prior to the discovery of Hayti by Columbus. We meet with passages in the writings of authors who lived eight or ten years before that time, which shew that the venereal disease was then not unknown. There is, in particular, a passage from a letter of Peter Martyr, who filled an important situation in Spain, dated 1488, (before the time that Columbus made the discovery), which affords unequivocal proof that the venereal disease was known at that time. If the venereal disease had been found by Columbus and his crew in Saint Domingo—if they contracted it and brought it back to Europe, we should expect to find that it had first existed in Spain, and that it had extended from Spain over the rest of Europe. Now we do not find that such was the case. If we consider that the venereal disease first originated at the time alluded to, it appears that it had broken out in Italy or France, not in Spain; and the name by which the disease was known in the first instance, points out this circumstance clearly. The name that was first given to the venereal disease, and which, in fact, it has retained up to the present day, is *morbus Gallicus*—the *French disease*. It was called by the Germans the *French pox*; that was the familiar expression in this coun-

try, and is known up to the present time. The French do not seem to have liked this name, and they called it the *Neapolitan disease*. But, at all events, it was known by one or other of these names—nobody thought of calling it the Spanish, or the Haytian disease—they gave it no name that denoted its origin to have been either in Spain or in the West Indies.

I conceive, therefore, that we may reject entirely the idea of the venereal disease being originally epidemic in the West Indies, and being imported by Columbus and his crew into Europe. If we reject the hypothesis of the West Indian origin of the disease, we may next inquire whether there is any clear proof that the disease broke out at Naples or Italy at the invasion of that country by the French, and whether it was conveyed by the military who accompanied Charles VIII. to France and the northern parts of Europe? I cannot say that it seems probable that the disease should have occurred at that era of the world: we cannot trace out any peculiar circumstances in the state of those countries at the time that would throw light on the origin of this strange affection. Hence we cannot be surprised that many of those who have examined the historical evidence upon this subject, have come to the conclusion that syphilis existed before either of these events. The circumstance of its not being accurately described may have arisen from persons not having observed it with great attention—not having taken cognizance of its symptoms, nor sufficiently understood those which we now know to be connected with each other. At this distance of time it is difficult for us to arrive at satisfactory evidence upon the subject, and it is not important that we should—it is only a question of curiosity. For my own part, I cannot help entertaining the opinion that the venereal disease existed long before the events that I have now alluded to—in fact, that it is just as old as the promiscuous intercourse of the sexes, which we now find to be constantly connected with it. There is no instance that we know of in which promiscuous intercourse takes place, that the venereal disease does not exist: at all events, this shews itself clearly as an important circumstance in aggravating and extending the disease. The greatest difficulty in the way of this belief is the silence of the old writers on a subject which to us appears so extremely important: we must consider, however, that both in the writings of the ancients, and of the more modern authors who wrote shortly before the end of the 15th century, we find various passages in which ulceration is mentioned as existing on the generative organs of both sexes. We find mention made of buboes, and we find clear evidence that a belief existed that such appearances could be communi-

ected from one individual to another by sexual intercourse.

There is a curious document published by Astruc, who is the author of a work, in which he collected together all that was known respecting the venereal disease at the time he wrote. He gives a curious document, which shews that at a period long anterior to the discovery of the West Indies, or the invasion of Naples, the possibility of communicating the disease in this way was recognised, and even made the basis of legal provisions. The document I allude to is an ordinance published by Johanna, Countess of Provence, and Queen of the Two Sicilies in 1347. She seems to have exercised a very maternal kind of care over the subjects committed to her charge, for this ordinance establishes a public brothel, and lays down regulations for its conduct and management. It seems strange that a young Queen should undertake a business of this kind; but the truth is, in foreign countries there were various similar establishments recognised by law; and in this moral town itself, about the same time that Queen Johanna granted this privilege, there was a public brothel in Southwark, under the care of the Bishop of Winchester, and the regulations and laws relating to it are still extant. Now in this document Queen Johanna sets out with ordering that all the girls who resorted to the establishment should wear a red epaulette or shoulder-knot on the left shoulder; she then points out in what part of the town it should be situated, and what is singular she directed that it should be placed near the convent of the Augustine friars—a situation that she perhaps thought would be convenient for the inmates of both establishments. But the important regulation is the fourth: she there directs that every Saturday a barber deputed by the consul of the town, should examine all the girls in the establishment, and if it was found that any of them had contracted illness “by fornication,” that they should be set apart from the rest, and not allowed to exercise their calling, lest the young men should contract the disease. It thus clearly appears that a knowledge existed that this particular kind of disease could be communicated from one person to another previous to the period that has generally been supposed to be the epoch of its origin. This document is dated 1387—you will find it in the work of Astruc; and I may say generally, that if you feel a curiosity in investigating minutely this part of the history of syphilis, you will find a collection of all the documents regarding it in that work.

I do not lay so great a stress on the silence of the older writers as some who have considered this subject have done. It does not appear to me very extraordinary that they should not have given what we can call

a clear description of the venereal disease. They may not have understood the nature of it—they may not have understood the relation of the various symptoms to each other. Supposing we saw a person with a certain eruption—we should not know, unless we had been previously informed of it, that such eruption arose from a sore that had existed weeks or months before. A long time must have elapsed before the mutual dependence of the symptoms of this disease on each other was recognized—a long time would elapse before such a description of the disease could be given as we should recognize as approaching to a correct one. We find many instances in the history of our art, where things that appear very clear have been overlooked for a length of time. Though it had been long known, and various physicians had written on the subject of small-pox, yet people did not know that it was contagious; this is a circumstance of modern discovery. The small-pox, measles, and scarlet fever, were confounded together for centuries, and no distinction was made between these three affections till a comparatively recent time; indeed between the measles and scarlet fever, no distinction was made till about the middle of the last century. That the mere silence of persons who have written on a subject, respecting some parts of its history, does not prove that what they omitted to notice did not exist, we have clear evidence from other considerations. Mr. Hunter must be deemed to have been an acute observer, and he took great pains in investigating the venereal disease;—Mr. Pearson also gave his attention to it; and yet neither of these were acquainted with gonorrhœal ophthalmia or syphilitic inflammation of the eye. Now if persons, two or three hundred years hence, should argue that these affections did not exist, because these writers did not observe them, they would come to a wrong conclusion; and I think a like error is committed by those who argue that the disease did not exist in ancient times, because the medical writers of that period did not furnish a clear description of it.

Syphilis can only be produced by poison communicated from a diseased to another person. In the great majority of instances, this morbid influence is conveyed by the secretion of a sore, which is applied to the sound surface of a healthy part, and produces the primary symptom of the disease in that part—namely, an ulcer. That the matter or pus, thus secreted from a primary venereal sore, is capable of infecting another person to whom it is applied, is quite unequivocal. The next question will be, is the poison conveyed equally by the matter formed in a bubo? That I do not know. Is the infectious power present in the secretion of a secondary ulcer? I believe it is not.

Farther: the venereal infection is conveyed by the blood of the mother to the child in utero, especially when the mother labors under the secondary or constitutional form of the disease. Whether it is equally conveyed by the primary form of the disease, I am not exactly aware. A question naturally occurs, whether a female can receive the disease by cohabitation with a man who has secondary symptoms? This is a question rather difficult to solve. We find it difficult to arrive at clear evidence on that point, because, when we come to examine particular cases, the motives for concealment and misrepresentation are so strong (as these are questions that occur in married life, and in which the honor of the parties is concerned) that we cannot obtain evidence on which we can entirely rely. I will only say, that I have seen some instances in which, from all the inquiries that I could make, I was led to conclude that syphilis had been conveyed in this way, from the husband to the wife—that is, the husband, when laboring under constitutional syphilis, by cohabitation with his wife had conveyed the disease to her. I do not see any difficulty in admitting the transmission of the disease in this way. The communication of syphilis from the mother to the child in utero, shews that the blood of the mother becomes infected; and if blood transmits the disease, I do not see why seminal secretion should not communicate it. This is a point, however, about which I am not clear.

We frequently meet with the expression *venereal poison*, or *virus*; and we are naturally anxious to know what the poison or virus is. The only description I could give would be this—that it is that state of secretion of a sore which, by contact, is capable of producing a similar sore in another person;—that it is the state of the blood of the mother which renders it capable of communicating the affection to the child in utero; but what these particular states are, we are unable to determine—that is, we have no sensible signs, we know of no characteristic changes, by which the matter of a sore, or the blood of a pregnant woman under such circumstances, differs from ordinary matter or from ordinary blood; we only know that the poison exists, by its effects. When, therefore, we read of the venereal virus “entering” the constitution, or being “expelled” from the constitution—or of the constitution being “impregnated” with it, or of its “lurking” in the system—these are so many vague expressions, which have no precise meaning.

The next point of inquiry is, whether there be one kind of poison only, or more venereal poisons than one? Now inasmuch as the real nature of the poison—that is, the real source of the symptoms, is so far unknown to us—this question resolves itself into another: whether, among the

various symptoms that we recognize as syphilis, there are such differences, and observed under such circumstances, as to induce us to refer them to different sources? We must acknowledge, on a superficial view of the subject, that there is a considerable diversity in these symptoms, to which we give collectively the simple name of syphilis, or venereal disease—that there is a diversity, whether we regard the primary or the secondary symptom. The primary symptoms may be a simple abrasion, or an excoriated ulcer, or an ulcer with induration, or a phagedenic or a sloughing ulcer. Syphilis may consist either of an ulcer alone or with a bubo, or it may consist of those primary symptoms followed by papule, tubercles, or scaly eruption, or by ulceration of the skin—or by superficial or excavating ulcer of the tonsils—or by swelling and enlargement of the bones, or of the periosteum, or of the joints. Heretofore all the appearances called syphilitic were referred to one source—they were considered only as the various effects of one poison. In more modern times, and more particularly by Mr. Hunter, a distinction was attempted to be drawn, derived from the effects of mercury. When the disease got well without the administration of mercury, it was considered not to be syphilitic; and those diseases arising from sexual intercourse, which got well under the use of mercury, were considered to be syphilitic;—this criterion was drawn from the effect of that particular remedy. Mr. Carmichael, of Dublin, who is surgeon to an Hospital in that city, where a large number of persons affected with syphilis are admitted, has written an Essay on the Venereal Disease, containing the result of his observations, and giving many excellent practical rules for the treatment of such affections. In this work he has advocated the opinion of a plurality of poisons, for the result of his investigations has led him to believe that there are more poisons than one. He has attempted to shew that each particular kind of primary ulcer is attended with its peculiar set of secondary symptoms. He has, therefore, connected together the primary ulcers with the secondary symptoms, which he considers particularly to belong to them; and he has thus established, in his own opinion, the existence of four distinct kinds of affection, which he considers as the result of so many different poisons. I am fully aware that many of the distinctions which Mr. Carmichael has pointed out are founded in observation; and if you read his book, you will recognize the justice of many of his remarks; but I should not say that the combinations of symptoms which he has pointed out are so constant and invariable as to lead me to adopt the same conclusion that he has arrived at, of the existence of four distinct poisons; for I

find that the particular kinds of appearances are more mixed together than he is willing to allow, and that the symptoms are not met with in so pure a state as he describes them. I cannot go with him, therefore; in adopting the idea of these four kinds of venereal poison; at the same time I recommend to you strongly his work on Venereal Diseases, as perhaps the best practical *tréatise* on the subject, and as conveying, in my opinion, the best rules and the soundest directions on the important point of treatment.

Now, in investigating this point, about the unity or plurality of syphilitic poisons, if we come to propose a test, we find our knowledge of the subject to be extremely imperfect. We do not know, for instance, whether each particular sore propagates its like or not. We cannot say, that phagedenic ulceration in a woman will give rise to phagedenic ulceration in a man; nor can we venture to assert that the existence of ulceration at all in a woman is necessary to the production of ulceration in a man;—so that this very first point in the natural history of the disease is at present very obscure. We want evidence on the subject, and, in fact, we are likely to want it; because we cannot make experiments—we cannot inoculate with this as we do with the small-pox. I had a woman under my care in the hospital—a married woman, who had contracted the disease from her husband; and in her it consisted in extensive phagedenic ulceration of the nymphæ, which had nearly destroyed one of them. At the same time, the husband of the woman was an out patient, and he had got a superficial sore on the prepuce, which had no phagedenic character; yet this disease in the man gave phagedena to the woman.

Dr. Fergusson, who was inspector of hospitals in the British service in Portugal, had occasion to see an officer laboring under chancres, with a highly-inflamed state of the parts, proceeding to sloughing, in consequence of sexual intercourse that he had had four days before; and he had been guilty of no impropriety to produce this bad state of the sores. Dr. Fergusson, with great difficulty, by active antiphlogistic treatment, prevented mortification of the penis. However, the gentleman had contracted the disease from an opera dancer at the Lisbon theatre, who went on, having intercourse with other persons and infecting all of them, yet dancing all the time, as if she ailed nothing. Mr. Evans, an English military surgeon, had an opportunity of being present at some inspections of women of the town in France, where they are obliged to undergo examination by order of the police. In some instances he saw more than a hundred of these women examined, yet he observed little disease among them,—and

such disease as there was consisted in slight discharge and excoriation; but, at the same time, some British soldiers who had intercourse with them exhibited numerous instances of ulcerations of the ordinary character, which they could only have contracted from those women, who had no ulcers. Again: it has happened, both in military and civil life, that different individuals have had intercourse, in rapid succession, with one and the same woman;—one has contracted gonorrhœa, another has had a sore, and perhaps a third has escaped without any disease at all. We are, therefore, much in the dark respecting the primary point in this investigation;—we do not really know whether the particular forms of the disease propagate the same forms to other individuals; we do not, in fact, know the circumstances under which each particular form of disease arises.

Under this uncertainty, it has been the opinion of many that the diversities exhibited by the various symptoms of syphilis have their origin in circumstances belonging to the individual in whom they occur; that the particular character of the disease in each individual, arises from a difference of constitution—a difference in the state of health at the time the disease is contracted—a difference in the treatment and management, local or general. In favor of this view, there is a remarkable circumstance which has been mentioned by Dr. Fergusson. He has given a short paper on the state of the venereal disease in Portugal;—it is published in the fourth volume of the Medical and Chirurgical Transactions. He says that the venereal disease in Portugal is extremely mild; that the natives of that country are in the habit of treating it by vegetable decoctions and low diet; that they suffer little from it; that it seldom produces serious symptoms; that when it goes into a constitutional form, it wears itself out under this treatment, not interfering materially with the health. Thus he considers that the disease, among the Portuguese, has lost its virulent character; but he says that the British troops and officers had the venereal disease in that country with the utmost severity—that, in fact, a greater number of instances of loss of the penis occurred among them, in a short time, than he supposed could be presented by all the hospitals of the country for a number of years. Yet the disease had arisen from the infection of the mild disease that I have just mentioned. The secondary symptoms were of the most severe kind, and extremely intractable.

If we view syphilis collectively, we should say that, although it is a disease of an inflammatory character, it is rather chronic than acute; that it is not marked by high inflammation, not rapid in its progress, not attended with serious constitutional dis-

Farther: the venereal infection is conveyed by the blood of the mother to the child in utero, especially when the mother labors under the secondary or constitutional form of the disease. Whether it is equally conveyed by the primary form of the disease, I am not exactly aware. A question naturally occurs, whether a female can receive the disease by cohabitation with a man who has secondary symptoms? This is a question rather difficult to solve. We find it difficult to arrive at clear evidence on that point, because, when we come to examine particular cases, the motives for concealment and misrepresentation are so strong (as these are questions that occur in married life, and in which the honor of the parties is concerned) that we cannot obtain evidence on which we can entirely rely. I will only say, that I have seen some instances in which, from all the inquiries that I could make, I was led to conclude that syphilis had been conveyed in this way, from the husband to the wife—that is, the husband, when laboring under constitutional syphilis, by cohabitation with his wife had conveyed the disease to her. I do not see any difficulty in admitting the transmission of the disease in this way. The communication of syphilis from the mother to the child in utero, shews that the blood of the mother becomes infected; and if blood transmits the disease, I do not see why seminal secretion should not communicate it. This is a point, however, about which I am not clear.

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Dr. Fergusson, who was inspector of hospitals in the British service in Portugal, had occasion to see an officer laboring under chancres, with a highly-inflamed state of the parts, proceeding to sloughing, in consequence of sexual intercourse that he had had four days before; and he had been guilty of no impropriety to produce this bad state of the sores. Dr. Fergusson, with great difficulty, by active antiphlogistic treatment, prevented mortification of the penis. However, the gentleman had contracted the disease from an opera dancer at the Lisbon theatre, who went on, having intercourse with other persons and infecting all of them, yet dancing all the time, as if she ailed nothing. Mr. Evans, an English military surgeon, had an opportunity of being present at some inspections of women of the town in France, where they are obliged to undergo examination by order of the police. In some instances he saw more than a hundred of these women examined, yet he observed little disease among them,—and

such disease as there was consisted in slight discharge and excoriation; but, at the same time, some British soldiers who had intercourse with them exhibited numerous instances of ulcerations of the ordinary character, which they could only have contracted from those women, who had no ulcers. Again: it has happened, both in military and civil life, that different individuals have had intercourse, in rapid succession, with one and the same woman;—one has contracted gonorrhœa, another has had a sore, and perhaps a third has escaped without any disease at all. We are, therefore, much in the dark respecting the primary point in this investigation;—we do not really know whether the particular forms of the disease propagate the same forms to other individuals; we do not, in fact, know the circumstances under which each particular form of disease arises.

Under this uncertainty, it has been the opinion of many that the diversities exhibited by the various symptoms of syphilis have their origin in circumstances belonging to the individual in whom they occur; that the particular character of the disease in each individual, arises from a difference of constitution—a difference in the state of health at the time the disease is contracted—a difference in the treatment and management, local or general. In favor of this view, there is a remarkable circumstance which has been mentioned by Dr. Fergusson. He has given a short paper on the state of the venereal disease in Portugal;—it is published in the fourth volume of the Medical and Chirurgical Transactions. He says that the venereal disease in Portugal is extremely mild; that the natives of that country are in the habit of treating it by vegetable decoctions and low diet; that they suffer little from it; that it seldom produces serious symptoms; that when it goes into a constitutional form, it wears itself out under this treatment, not interfering materially with the health. Thus he considers that the disease, among the Portuguese, has lost its virulent character; but he says that the British troops and officers had the venereal disease in that country with the utmost severity—that, in fact, a greater number of instances of loss of the penis occurred among them, in a short time, than he supposed could be presented by all the hospitals of the country for a number of years. Yet the disease had arisen from the infection of the mild disease that I have just mentioned. The secondary symptoms were of the most severe kind, and extremely intractable.

If we view syphilis collectively, we should say that, although it is a disease of an inflammatory character, it is rather chronic than acute; that it is not marked by high inflammation, not rapid in its progress, not attended with serious constitutional dis-

turbance; yet particular symptoms often shew high inflammatory action, and well-marked fever.

Respecting the natural course and termination of this disease, the most erroneous opinions have prevailed. Even until quite modern times, it has been represented that syphilis is essentially destructive in its nature—that it destroys, by ulceration, the particular organ in which it is seated, at the same time that it proceeds from one part to another with unrelenting fury (according to the description of some who have written on it), and that, in fact, its ravages can only be combated by mercury—and that if mercury be not exhibited it is sure to produce the destruction of the individual in whom it takes place. Such is the picture usually given of syphilis; and this, in fact, was the general opinion at the time that Mr. Abernethy published his *Observations on Diseases resembling the Venereal*;—and before he published that treatise, he took the pains of applying to several of the most eminent surgeons in London, to ascertain what was the opinion of the profession on this point. He applied among others to Mr. Cline and Mr. Pearson, two gentlemen in whose experience and judgment he probably placed the greatest confidence. Now all to whom he applied were unanimous in opinion that the action of syphilis was regularly progressive—that it destroyed the part in which it commenced—that it proceeded from part to part until it destroyed the individual, unless its course were checked by mercury—and that mercury was the only means by which its ravages could be arrested.

Now the lapse of a very few years has sufficed to overthrow this generally-received notion. It has since been clearly made out that every symptom of syphilis can be cured without mercury; that there is not a single symptom of the disease which may not, if left to itself, come to a natural conclusion; and that, if left to its own course, it will wear itself out in time without destroying the individual. Indeed, so great has been the revolution of opinion on this subject that some persons, and those of considerable experience and judgment, have adopted the opinion the mercury itself is the source of those secondary symptoms that are ordinarily ascribed to syphilis, and they have proscribed it entirely from their practice. However, the opinion which I have above mentioned had been generally prevalent in the profession for a long series of years. It was the opinion entertained by Astruc and by Hunter, and is the basis on which his reasoning in his work on the venereal disease proceeded. It was the opinion entertained by Mr. Abernethy, being adopted by him from Mr. Hunter; and it is the foundation on which the views on this subject promulgated by Mr. Abernethy rest. Now the very exten-

sive prevalence of this completely erroneous notion, and the firm faith with which it was held, are calculated, in my opinion, to teach us a very salutary lesson—that of examining for ourselves the foundation of generally-received doctrines—that of placing very little confidence on the authority of the greatest names when they relate merely to matters of opinion. Inasmuch as the notion of the progressively destructive nature of syphilis, except combated by mercury, has been entirely discarded, of course the various notions derived from that opinion respecting syphilis, and diseases resembling it—all these may be set aside, and we may completely discard from the surgical vocabulary a variety of words that were founded on this notion, such as *cacheria syphiloidea*, *pseudo-syphilis*, &c. All these are words which have no clear meaning, or which are founded on obvious error; and therefore the sooner we discard them the better. They have no other effect than that of introducing perplexity, and embarrassing the consideration of a subject in itself sufficiently difficult.

The most important feature in the natural history of syphilis is the progress of the complaint from one part of the body to another; the succession of symptoms which it shews in the various organs and textures, and frequently the return of the disease in the same organ or texture after it has apparently ceased. Some forms of the disease are attended with much suffering, great local destruction, and a considerable constitutional disturbance. When we find that the symptoms are capable of shewing themselves from time to time in different parts; when we find that they can come on again and again in the same part; when we find they require, as they frequently do, the employment of vigorous methods of treatment, which exert a powerful influence on the animal economy, we cannot wonder that the constitution should be enfeebled by the progress of the disease, and that the patient should sometimes ultimately sink under it. In this point of view, therefore, the nature of syphilis, although not so essentially destructive as it was before imagined to be, is sufficiently serious. I may observe, however, that the description I have now given applies only to a small proportion of cases out of the whole number; it is only in a few that such frequent recurrences—such obstinate relapses—take place; and the instances are few indeed in which it proves fatal in this way.

General Treatment.

With respect to the treatment of syphilis, considered generally, I have already mentioned the notion of mercury being the only means by which it was supposed possible to control or arrest the progress of the disease; and this belief was very generally held in the

profession, from the time that I have mentioned, as the supposed origin of syphilis, till within the last few years. It must be observed, however, that when we come to enquire minutely into the matter historically, we find that there were always persons who had some doubts on the subject—that this opinion, although so extensive that it may be considered to have regulated the practice generally, was not absolutely universal. It was found that mercury, in many instances, itself produced prejudicial effects; that in many instances a disease that was supposed to have been cured by mercury came on again, and thus the remedy was seen to be imperfect. Hence surgeons at all periods since the disease has been well known, have turned their attention to the discovery of some other means by which the symptoms might be more effectually controlled. Thus, from time to time, various other articles have been proposed as remedies for the venereal disease; and cases have been published in which these articles, various as they are in their nature, are said to have produced the desired effect of curing the complaint. Now, according to the prevalent notion of mercury being the only cure for the venereal disease when a cure was stated to have been produced by other means, as sarsaparilla, nitric acid, or various other things that were proposed, why it was said these patients got well, because it was not the *true* venereal disease. Now we can have no doubt that these cases were as truly syphilis as any other. We can have no doubt in admitting further, that those cases which were supposed to be incorrectly reported, or not properly belonging to the venereal disease, were really syphilitic cases, and were actually cured by those means. The clearest evidence on the subject, however, respecting this point—that mercury is not necessary to cure the venereal disease—has been afforded principally by the investigations of the late Mr. Rose, surgeon of St. George's hospital. Having frequently occasion to treat the venereal disease, in consequence of being attached to one of the regiments of guards, he directed his attention to the investigation of the subject. In consequence of some doubts of the specific power of mercury over the disease, and of the absolute necessity of this remedy to arrest its progress having sprung up in his mind, he determined to put the point to the test of experiment. He had charge of a battalion of the Coldstream Guards; and as they were stationed in London, and were in constant intercourse with the lowest prostitutes of the town, they afforded him abundance of cases. He determined to treat all the primary symptoms that might occur in the regiment simply by common antiphlogistic means, and not to employ any mercury, let them have either the characters supposed to be those of true syphilis or any other. He resolved, in short,

that all should be treated without mercury. The result of his experience is contained in a paper published in the eighth volume of the Medical and Chirurgical Transactions. After he had been following this plan for the space of two years, he found that all primary syphilitic symptoms whatever could be cured without the employment of mercury: whether they were indurated chancres, superficial sores, or whatever character they might have, ordinary antiphlogistic means simply, with rest and reduced diet, were sufficient to conduct these cases to a cure; and, in fact, for that length of time he employed no mercury in the treatment of any primary or secondary syphilitic affections. He says that in most instances the cure was slower than if mercury had been employed, though in some the sores healed rapidly. It appears too that perhaps there was a greater number of secondary affections, but that those secondary affections were always mild, and that they gave way to simple treatment without mercury. Thus he established, on the clearest evidence, that mercury is not necessary; he overturned the hitherto prevalent notion of mercury being absolutely required for arresting the progress of the disease, and shewed that the disease does not possess that supposed destructive character which I have before alluded to. In my opinion this is the most important step that has ever been made towards understanding the nature of the venereal disease; and I should place the truth, thus established by Mr. Rose, in value far beyond any of the speculations or views that are contained in the work of Mr. Hunter on this subject.

In consequence of this paper of Mr. Rose, the non-mercurial treatment of the venereal disease has been extensively tried in the British army; and registers have been kept of the result of such treatment; so that I believe at the Army Medical Board there are now registers shewing the result of the treatment of the venereal disease, both with and without mercury, amounting to many thousands of cases; thus affording ample means of making comparative estimates of the two modes of proceeding; and the results, so far as the non-mercurial treatment goes, will be found sufficient to confirm the conclusions which Mr. Rose arrived at—namely, that mercury, although it might facilitate the cure under certain circumstances, was not absolutely necessary to effect it.

In other countries as well as this, similar investigations have been made with similar results; and the consequence of these inquiries has been a general revolution of opinion on the subject, and a corresponding change in practice. Persons who have the venereal disease are now no longer doomed to go through those long and severe courses of mercurial treatment which they underwent heretofore when mercury was supposed to

be a specific, and absolutely necessary to the cure of the disease.

In a great many forms of venereal disease the employment of mercury is almost entirely abandoned; and in those cases in which it is still given, it is used more moderately. Some have even gone farther; and I may mention that Dr. John Thompson, the present teacher of medicine in Edinburgh—a person whose medical learning and experience, and judgment, need no commendation of mine—has long adopted the non-mercurial treatment of syphilis; and for a considerable number of years, I believe I may say, has entirely discarded mercury, both for primary and secondary affections of all kinds; administering mercury in no form of venereal disease; and he considers that the patients recover much better without it. He is of opinion that many of the affections, regarded as the secondary symptoms of syphilis, especially the more aggravated forms of them, are owing to the use of mercury, an opinion in which I do not altogether concur; nor can I agree with him in discarding mercury from our treatment of syphilis altogether. I have seen so many instances in which the efficacy of the remedy has been undoubted; I have seen so many cases in which the disease might get well without mercury, but in which it has got better, more quickly, and with less effect on the constitution, than without mercury, that though I fully agree in the modified employment of mercury, and in the propriety of using it more sparingly, I cannot go so far as to discard it from practice altogether. I still think it a valuable remedy, capable of being very useful in the treatment of venereal diseases.

CASE OF

ENLARGEMENT AROUND THE
HIP-JOINT.

*To the Editor of the London Medical
Gazette.*

Tiverton, Feb. 24, 1880.

SIR,

If the following case may be deemed acceptable for publication, I am sure you will readily insert it in your valuable journal of next week.

Mary Reed, a married woman, aged 23, living in this town, applied to me about four months since with an immense swelling around the left hip, and extending considerably down the thigh. The breadth of the tumor was about fourteen inches; the length, from the

back part of the ileum to the lower part of the sacrum, proportionally large. I learnt, from her own account, that the tumor had existed nearly two years, and she supposed had originated from a violent cold. On examining the spine, I found a projection of the spinous processes of the lumbar vertebræ; which, on inquiry, I found had proceeded from a fall or wrench when a child. There was no pain produced on pressure; but the pain which she felt at times from the tumor was excessive. Her constitution was much impaired, and her loss of appetite tended to keep her in a state of debility. The tumor was rather soft, yielding in some degree to the pressure of the hand, and conveying the sensation of a fluid deeply seated. I considered this a fair opportunity for putting Mr. Scott's practice into effect, which I had seen adopted at the London hospital when a student there, by the frequent application of the Ung. Hydr. Comp. and by repeated bandaging. The first application gave her much relief from the pain, and I found that on every successive application the tumor gradually diminished. The tumor is now scarcely apparent, nor is there much perceptible difference between one side and the other. The application is now omitted, as she walks perfectly well, and without the least deformity in her person, which had previously existed. Her general health is quite established, and the pain she once so much complained of has left her. The efficacy of this plan of treatment is beyond a doubt in all chronic tumors about the neck, the knee-joint, and other parts of the body. I have succeeded in many cases since I have been here with the same mode of treatment, and can therefore speak of the value of this plan so ably persevered in by Mr. Scott.

I am, Sir,

Your obedient servant,

FRED. S. GERVIS.

CONSTIPATION.

*To the Editor of the London Medical
Gazette.*

SIR,

If you consider the following case of constipation of the bowels worthy of in-

sertion in your valuable journal, it is much at your service.

We are, sir,
Your obedient servants,
TAYNTON & WILLIAMS,
Surgeons.

Bromley, Kent, Feb. 26, 1830.

Saturday, Feb. 6th.—We were desired to visit Mary Waite, aged about 35, who had borne several children, and was then in the fifth month of pregnancy. She complained of severe pain in the bowels, but there was not any tenderness; the pulse natural, the skin cool. She said she had a motion on Friday morning. As there was a disposition to sickness, some pills, with calomel and cathartic extract, were prescribed for her.

7th.—The bowels had not been moved; no tenderness of the abdomen; pulse 80, tongue moist, skin not hot. As the sickness was much increased, small doses of a solution of Epsom salts were given every half hour. Injections of warm water and salt were carefully thrown up by means of Read's syringe. In the evening three grains of calomel were given every four hours; the injections and epsom salts continued; fomentations also were frequently applied.

8th.—The vomiting was excessive—great quantities were suddenly discharged from the stomach similar to what is brought up in cases of strangulated hernia, possessing the same smell, but not quite so dark colored. There was now considerable tumefaction of the abdomen, but with very little tenderness; pulse under 90, tongue moist, countenance tranquil. The calomel and sulphate of magnesia continued. In the evening two pills, each containing one drop of croton oil, were given at an interval of two hours. Injections with turpentine.

9th.—Vomiting very violent, with severe pain in the epigastric region. The abdomen greatly distended, but not tender; pulse quicker, tongue not dry. Two more pills with croton oil; sulphate of magnesia in small doses; injections occasionally.

10th.—Vomiting the same in color and smell; prodigious distention of the abdomen; pulse very frequent; anxiety of countenance. Effervescing draughts to be given very frequently; and pills with scammony two grains, calomel two

grains, gamboge one grain, every third hour.

11th.—Every symptom aggravated. The same medicines continued.

12th.—Constant vomiting; pulse very quick and feeble; great prostration of strength. Gave her ammonia with camphor; continued the pills with gamboge, &c. The abdomen enormously swelled.

13th.—Great debility; pulse very small and quick. She expressed a wish for bottled porter, which was given her. She drank it eagerly, and it appeared to afford immediate relief. She continued to take some frequently, and all sickness ceased from that time. She also had arrow root, with brandy, strong broth, and cordial medicines, with full doses of ammonia. In the evening she passed three loose motions, some small portions of hardened fæces having previously come away with an injection.

14th.—In the morning much better in every respect. The swelling abated; she had several loose motions. At eight in the evening she miscarried; the fœtus appeared to be about the 4th month.

From this time she recovered without a recurrence of one untoward symptom. The bowels have acted daily without the aid of any medicine.

The vomiting of such prodigious quantities of fluid, which had the smell and appearance of feculent matter; the very great enlargement of the abdomen, and ultimate recovery in this case; appear to us so uncommon, as to be deserving of notice.

PHRENOLOGY.

To the Editor of the London Medical Gazette.

SIR,

FROM the respect which I entertain for your journal, and for the principles on which it is conducted, I cannot but feel regret when it deviates from the sound judgment and correct feeling which usually characterize it. An instance of such deviation occurs in your last number, which I am induced to notice solely in consideration of the discredit which the admission of such jejune and censurable criticism cannot but reflect on your pages.

In the examination of Dr. Pring's "Sketches, &c." the reviewer introduces the following paragraph: "But we quite agree with the author in deeming it to be wholly unnecessary for him to retrace his steps over the ground, and attempt to improve his observations on craniology, as he has said quite as much as it merits, and enough to expose the palpable absurdity of its doctrines." I beg to remind the reviewer that this is neither criticism nor argument, but dogmatic assertion and rather coarse abuse. If the doctrines of phrenology be so palpably absurd, what are they who uphold these doctrines? Yet among them may be found many distinguished for high intellect, extensive literature, and unbending integrity. To designate as palpable absurdity what such men regard as well-established truth, is hardly courteous; while, in point of argument, the reviewer can scarcely expect his assertion, unsupported by evidence or proof of any kind, to outweigh the mass of facts which the phrenologists produce in confirmation of the truth of their system.

Dr. Pring, with commendable modesty, has apologised for his strictures by acknowledging that they were penned at a distant period. It is sufficiently obvious that Dr. Pring has thought but little of phrenology since his perusal of the celebrated article in the *Edinburgh Review*; (so little, indeed, that he grossly mis-states its principles), and that having once formed his judgment, in conformity with that article, he has taken little pains to study the subject further, or to acquaint himself with the repeated and triumphant refutations which that flippant and shallow production has received. Had the reviewer been equally candid, he too, I suspect, might have acknowledged that he knew but little of the science which he so confidently decries, and that his researches into its merits have not extended beyond the "unrivalled" article which he lauds for its "exquisite wit and forcible argument." The wit may have dazzled his imagination, but I am slow to believe that such argument as the article displays could have satisfied his judgment if this had been honestly exercised. With the reviewer's own convictions, however, I have no concern. If they satisfy himself I am quite content to leave them undisturbed, feel-

ing no desire whatever to abate the complacency with which he may contemplate them. But on behalf of the phrenologists, I do claim, that when he again thinks proper to denounce their science as a palpable absurdity, he will condescend to adduce some ground, or fact, or reasoning, for an assertion as unsupported by sound philosophy as it is deficient in common urbanity.

To phrenology such puerile assaults are perfectly harmless, and on its account I should not deem them worthy the slightest notice. But I feel some interest in the credit of your journal, which must suffer if such arrogant pretension and self-sufficiency be admitted into a department of the work with which the editor is in general identified; and which, as he values the estimation of every enlightened and liberal mind, he is bound more especially to control.

I am, Sir, yours, &c.

A PHRENOLOGIST.

Feb. 14, 1830.

[The high respectability of the gentleman who signs himself "a Phrenologist," induces us to give insertion to his protest. He says that the Editor is generally identified with the reviewer; but the truth is, that in a periodical like this, the Editor can do little more in the analytic department than take care that competent persons are employed. In the present instance, we cannot admit that in the passage quoted there is any thing meriting the appellation of "abuse;" and we appeal to our correspondent himself, whether the article in question be not a very close and accurate analysis of a most abstruse and elaborate work.—E. G.]

MEDICAL ATTENDANCE ON THE POLICE.

To the Editor of the London Medical Gazette.

SIR,

It may not, perhaps, be known to many of your readers, that on occasion of the establishment of the new metropolitan police, proposals were made by the government to several of the charities in London for the accommodation of the sick of that large and rapidly increasing body. The requisite expenses were, of

course, to be defrayed by the government, and the measure was obviously suggested by the very laudable wish to economize the public money. The manner in which this proposal has been met by the several charities applied to is not unworthy of your notice.

The Governors of St. George's Hospital, as I am informed, replied, that they could not consider such an application of the means and resources of the hospital consistent with its avowed purpose—the charitable relief of the sick poor—and they consequently declined to enter into the proposed arrangement. A similar reply was sent by the Governors of a very useful institution, the Western Dispensary, in Charles-street, Westminster.

The Small-Pox and Fever Hospitals, having ample accommodation for all the demands likely to be made upon them, have agreed, it is said, to receive the new police, upon terms mutually advantageous. The medical attendants of these institutions are, I believe, paid for their services, and the arrangement, therefore, is here well calculated to benefit the public, without interfering in any degree with the interests of the sick poor.

Within the last few days I have been given to understand that the Governors of the Westminster General Dispensary have also agreed to the proposals of government, and that a large body of the new police are speedily to be under the medical care of the physicians and surgeons of that institution. I am induced to call your attention to this circumstance, as it seems to be calculated to lead either to an abuse of charity, or to the diminution of that just dignity which the practitioners of physic and surgery should strive to uphold.

The physicians and surgeons of that dispensary are acting at present gratuitously. With reference to the new police they must either continue to act gratuitously, or they must not. If they receive a salary for such portion of their services, (and the government could neither expect nor wish it to be otherwise), then, however impartially the medical officers may act, the sick poor will be tempted to think that the policemen are preferred before them, and a door at least is open for the abuse of an excellent charity. If, on the other hand, the medical officers of that dispensary consent to attend the sick of

the new police without that proper remuneration which the laborer in every vineyard undoubtedly merits, they are neither true to themselves nor to the profession of which they form a part.

I feel perfectly confident that the gentlemen of that institution (for whom, individually, I entertain the highest respect) will take these observations in good part. Anxious as I am to see the members of the medical profession foremost in the exercise of active charity to the sick poor, I can see no reason why a body of men, raised, and clothed, and fed by the state, for the purposes of the state, should be attended in sickness gratuitously.

I am, Sir,
Your most obedient servant,
CENSOR.

London, Feb. 28, 1830.

INSUFFICIENT APPRENTICESHIP.

To the Editor of the London Medical Gazette.

February 21st, 1830.

SIR,

THE very sensible letter of your correspondent, signing himself "Surgeon, Apothecary, and Man-Midwife," in your Number of 9th January, induces me to state a very strong example of the injury to qualified general practitioners, by men who, having served their apprenticeship behind the counter of some apothecary or druggist (who, taking advantage of the apothecaries' act, signs a certificate with his name as *apothecary*, because, forsooth, he *sold drugs* before 1815), go up to town, "do their six months' needful," pass the Apothecaries' Hall, return into the country, open retail shops, and affix brass plates to their doors, with the word *surgeon* engraved on them.

A person who served an apprenticeship, not behind an apothecary's counter, not even behind a druggist's counter, but in the shop of a grocer, who also sold patent medicines and a few drugs, at the expiration of his servitude went to town, and, after no long time, returned into the country, with a certificate from the Apothecaries' Company, licensing him to practice; opened a retail shop (where you may purchase perfumeries, fish sauces, lamp oils, &c. as

Farther: the venereal infection is conveyed by the blood of the mother to the child in utero, especially when the mother labors under the secondary or constitutional form of the disease. Whether it is equally conveyed by the primary form of the disease, I am not exactly aware. A question naturally occurs, whether a female can receive the disease by cohabitation with a man who has secondary symptoms? This is a question rather difficult to solve. We find it difficult to arrive at clear evidence on that point, because, when we come to examine particular cases, the motives for concealment and misrepresentation are so strong (as these are questions that occur in married life, and in which the honor of the parties is concerned) that we cannot obtain evidence on which we can entirely rely. I will only say, that I have seen some instances in which, from all the inquiries that I could make, I was led to conclude that syphilis had been conveyed in this way, from the husband to the wife—that is, the husband, when laboring under constitutional syphilis, by cohabitation with his wife had conveyed the disease to her. I do not see any difficulty in admitting the transmission of the disease in this way. The communication of syphilis from the mother to the child in utero, shews that the blood of the mother becomes infected; and if blood transmits the disease, I do not see why seminal secretion should not communicate it. This is a point, however, about which I am not clear.

We frequently meet with the expression *venereal poison*, or *virus*; and we are naturally anxious to know what the poison or virus is. The only description I could give would be this—that it is that state of secretion of a sore which, by contact, is capable of producing a similar sore in another person;—that it is the state of the blood of the mother which renders it capable of communicating the affection to the child in utero; but what these particular states are, we are unable to determine—that is, we have no sensible signs, we know of no characteristic changes, by which the matter of a sore, or the blood of a pregnant woman under such circumstances, differs from ordinary matter or from ordinary blood; we only know that the poison exists, by its effects. When, therefore, we read of the venereal virus “entering” the constitution, or being “expelled” from the constitution—or of the constitution being “impregnated” with it, or of its “lurking” in the system—these are so many vague expressions, which have no precise meaning.

The next point of inquiry is, whether there be one kind of poison only, or more venereal poisons than one? Now inasmuch as the real nature of the poison—that is, the real source of the symptoms, is so far unknown to us—this question resolves itself into another: whether, among the

various symptoms that we recognize as syphilis, there are such differences, and observed under such circumstances, as to induce us to refer them to different sources? We must acknowledge, on a superficial view of the subject, that there is a considerable diversity in these symptoms, to which we give collectively the simple name of syphilis, or venereal disease—that there is a diversity, whether we regard the primary or the secondary symptom. The primary symptoms may be a simple abrasion, or an excoriated ulcer, or an ulcer with induration, or a phagedenic or a sloughing ulcer. Syphilis may consist either of an ulcer alone or with a bubo, or it may consist of those primary symptoms followed by papulæ, tubercles, or scaly eruption, or by ulceration of the skin—or by superficial or excavating ulcer of the tonsils—or by swelling and enlargement of the bones, or of the periosteum, or of the joints. Heretofore all the appearances called syphilitic were referred to one source—they were considered only as the various effects of one poison. In more modern times, and more particularly by Mr. Hunter, a distinction was attempted to be drawn, derived from the effects of mercury. When the disease got well without the administration of mercury, it was considered not to be syphilitic; and those diseases arising from sexual intercourse, which got well under the use of mercury, were considered to be syphilitic;—this criterion was drawn from the effect of that particular remedy. Mr. Carmichael, of Dublin, who is surgeon to an Hospital in that city, where a large number of persons affected with syphilis are admitted, has written an Essay on the Venereal Disease, containing the result of his observations, and giving many excellent practical rules for the treatment of such affections. In this work he has advocated the opinion of a plurality of poisons, for the result of his investigations has led him to believe that there are more poisons than one. He has attempted to shew that each particular kind of primary ulcer is attended with its peculiar set of secondary symptoms. He has, therefore, connected together the primary ulcers with the secondary symptoms, which he considers particularly to belong to them; and he has thus established, in his own opinion, the existence of four distinct kinds of affection, which he considers as the result of so many different poisons. I am fully aware that many of the distinctions which Mr. Carmichael has pointed out are founded in observation; and if you read his book, you will recognize the justice of many of his remarks; but I should not say that the combinations of symptoms which he has pointed out are so constant and invariable as to lead me to adopt the same conclusion that he has arrived at, of the existence of four distinct poisons; for I

find that the particular kinds of appearances are more mixed together than he is willing to allow, and that the symptoms are not met with in so pure a state as he describes them. I cannot go with him, therefore; in adopting the idea of these four kinds of venereal poison; at the same time I recommend to you strongly his work on Venereal Diseases, as perhaps the best practical treatise on the subject, and as conveying, in my opinion, the best rules and the soundest directions on the important point of treatment.

Now, in investigating this point, about the unity or plurality of syphilitic poisons, if we come to propose a test, we find our knowledge of the subject to be extremely imperfect. We do not know, for instance, whether each particular sore propagates its like or not. We cannot say, that phagedenic ulceration in a woman will give rise to phagedenic ulceration in a man; nor can we venture to assert that the existence of ulceration at all in a woman is necessary to the production of ulceration in a man;—so that this very first point in the natural history of the disease is at present very obscure. We want evidence on the subject, and, in fact, we are likely to want it; because we cannot make experiments—we cannot inoculate with this as we do with the small-pox. I had a woman under my care in the hospital—a married woman, who had contracted the disease from her husband; and in her it consisted in extensive phagedenic ulceration of the nymphæ, which had nearly destroyed one of them. At the same time, the husband of the woman was an out patient, and he had got a superficial sore on the prepuce, which had no phagedenic character; yet this disease in the man gave phagedena to the woman.

Dr. Fergusson, who was inspector of hospitals in the British service in Portugal, had occasion to see an officer laboring under chancre, with a highly-inflamed state of the parts, proceeding to sloughing, in consequence of sexual intercourse that he had had four days before; and he had been guilty of no impropriety to produce this bad state of the sores. Dr. Fergusson, with great difficulty, by active antiphlogistic treatment, prevented mortification of the penis. However, the gentleman had contracted the disease from an opera dancer at the Lisbon theatre, who went on, having intercourse with other persons and infecting all of them, yet dancing all the time, as if she ailed nothing. Mr. Evans, an English military surgeon, had an opportunity of being present at some inspections of women of the town in France, where they are obliged to undergo examination by order of the police. In some instances he saw more than a hundred of these women examined, yet he observed little disease among them,—and

such disease as there was consisted in slight discharge and excoriation; but, at the same time, some British soldiers who had intercourse with them exhibited numerous instances of ulcerations of the ordinary character, which they could only have contracted from those women, who had no ulcers. Again: it has happened, both in military and civil life, that different individuals have had intercourse, in rapid succession, with one and the same woman;—one has contracted gonorrhœa, another has had a sore, and perhaps a third has escaped without any disease at all. We are, therefore, much in the dark respecting the primary point in this investigation;—we do not really know whether the particular forms of the disease propagate the same forms to other individuals; we do not, in fact, know the circumstances under which each particular form of disease arises.

Under this uncertainty, it has been the opinion of many that the diversities exhibited by the various symptoms of syphilis have their origin in circumstances belonging to the individual in whom they occur; that the particular character of the disease in each individual, arises from a difference of constitution—a difference in the state of health at the time the disease is contracted—a difference in the treatment and management, local or general. In favor of this view, there is a remarkable circumstance which has been mentioned by Dr. Fergusson. He has given a short paper on the state of the venereal disease in Portugal;—it is published in the fourth volume of the Medical and Chirurgical Transactions. He says that the venereal disease in Portugal is extremely mild; that the natives of that country are in the habit of treating it by vegetable decoctions and low diet; that they suffer little from it; that it seldom produces serious symptoms; that when it goes into a constitutional form, it wears itself out under this treatment, not interfering materially with the health. Thus he considers that the disease, among the Portuguese, has lost its virulent character; but he says that the British troops and officers had the venereal disease in that country with the utmost severity—that, in fact, a greater number of instances of loss of the penis occurred among them, in a short time, than he supposed could be presented by all the hospitals of the country for a number of years. Yet the disease had arisen from the infection of the mild disease that I have just mentioned. The secondary symptoms were of the most severe kind, and extremely intractable.

If we view syphilis collectively, we should say that, although it is a disease of an inflammatory character, it is rather chronic than acute; that it is not marked by high inflammation, not rapid in its progress, not attended with serious constitutional dis-

turbance; yet particular symptoms often shew high inflammatory action, and well-marked fever.

Respecting the natural course and termination of this disease, the most erroneous opinions have prevailed. Even until quite modern times, it has been represented that syphilis is essentially destructive in its nature—that it destroys, by ulceration, the particular organ in which it is seated, at the same time that it proceeds from one part to another with unrelenting fury (according to the description of some who have written on it), and that, in fact, its ravages can only be combated by mercury—and that if mercury be not exhibited it is sure to produce the destruction of the individual in whom it takes place. Such is the picture usually given of syphilis; and this, in fact, was the general opinion at the time that Mr. Abernethy published his *Observations on Diseases resembling the Venereal*;—and before he published that treatise, he took the pains of applying to several of the most eminent surgeons in London, to ascertain what was the opinion of the profession on this point. He applied among others to Mr. Cline and Mr. Pearson, two gentlemen in whose experience and judgment he probably placed the greatest confidence. Now all to whom he applied were unanimous in opinion that the action of syphilis was regularly progressive—that it destroyed the part in which it commenced—that it proceeded from part to part until it destroyed the individual, unless its course were checked by mercury—and that mercury was the only means by which its ravages could be arrested.

Now the lapse of a very few years has sufficed to overthrow this generally-received notion. It has since been clearly made out that every symptom of syphilis can be cured without mercury; that there is not a single symptom of the disease which may not, if left to itself, come to a natural conclusion; and that, if left to its own course, it will wear itself out in time without destroying the individual. Indeed, so great has been the revolution of opinion on this subject that some persons, and those of considerable experience and judgment, have adopted the opinion the mercury itself is the source of those secondary symptoms that are ordinarily ascribed to syphilis, and they have proscribed it entirely from their practice. However, the opinion which I have above mentioned had been generally prevalent in the profession for a long series of years. It was the opinion entertained by Astruc and by Hunter, and is the basis on which his reasoning in his work on the venereal disease proceeded. It was the opinion entertained by Mr. Abernethy, being adopted by him from Mr. Hunter; and it is the foundation on which the views on this subject promulgated by Mr. Abernethy rest. Now the very exten-

sive prevalence of this completely erroneous notion, and the firm faith with which it was held, are calculated, in my opinion, to teach us a very salutary lesson—that of examining for ourselves the foundation of generally-received doctrines—that of placing very little confidence on the authority of the greatest names when they relate merely to matters of opinion. Inasmuch as this notion of the progressively destructive nature of syphilis, except combated by mercury, has been entirely discarded, of course the various notions derived from that opinion respecting syphilis, and diseases resembling it—all these may be set aside, and we may completely discard from the surgical vocabulary a variety of words that were founded on this notion, such as *cacheria syphiloidea*, *pseudo-syphilis*, &c. All these are words which have no clear meaning, or which are founded on obvious error; and therefore the sooner we discard them the better. They have no other effect than that of introducing perplexity, and embarrassing the consideration of a subject in itself sufficiently difficult.

The most important feature in the natural history of syphilis is the progress of the complaint from one part of the body to another; the succession of symptoms which it shews in the various organs and textures, and frequently the return of the disease in the same organ or texture after it has apparently ceased. Some forms of the disease are attended with much suffering, great local destruction, and a considerable constitutional disturbance. When we find that the symptoms are capable of shewing themselves from time to time in different parts; when we find that they can come on again and again in the same part; when we find they require, as they frequently do, the employment of vigorous methods of treatment, which exert a powerful influence on the animal economy, we cannot wonder that the constitution should be enfeebled by the progress of the disease, and that the patient should sometimes ultimately sink under it. In this point of view, therefore, the nature of syphilis, although not so essentially destructive as it was before imagined to be, is sufficiently serious. I may observe, however, that the description I have now given applies only to a small proportion of cases out of the whole number; it is only in a few that such frequent recurrences—such obstinate relapses—take place; and the instances are few indeed in which it proves fatal in this way.

General Treatment.

With respect to the treatment of syphilis, considered generally, I have already mentioned the notion of mercury being the only means by which it was supposed possible to control or arrest the progress of the disease; and this belief was very generally held in the

profession, from the time that I have mentioned, as the supposed origin of syphilis, till within the last few years. It must be observed, however, that when we come to enquire minutely into the matter historically, we find that there were always persons who had some doubts on the subject—that this opinion, although so extensive that it may be considered to have regulated the practice generally, was not absolutely universal. It was found that mercury, in many instances, itself produced prejudicial effects; that in many instances a disease that was supposed to have been cured by mercury came on again, and thus the remedy was seen to be imperfect. Hence surgeons at all periods since the disease has been well known, have turned their attention to the discovery of some other means by which the symptoms might be more effectually controlled. Thus, from time to time, various other articles have been proposed as remedies for the venereal disease; and cases have been published in which these articles, various as they are in their nature, are said to have produced the desired effect of curing the complaint. Now, according to the prevalent notion of mercury being the only cure for the venereal disease when a cure was stated to have been produced by other means, as sarsaparilla, nitric acid, or various other things that were proposed, why it was said these patients got well, because it was not the *true* venereal disease. Now we can have no doubt that these cases were as truly syphilis as any other. We can have no doubt in admitting further, that those cases which were supposed to be incorrectly reported, or not properly belonging to the venereal disease, were really syphilitic cases, and were actually cured by those means. The clearest evidence on the subject, however, respecting this point—that mercury is not necessary to cure the venereal disease—has been afforded principally by the investigations of the late Mr. Rose, surgeon of St. George's hospital. Having frequently occasion to treat the venereal disease, in consequence of being attached to one of the regiments of guards, he directed his attention to the investigation of the subject. In consequence of some doubts of the specific power of mercury over the disease, and of the absolute necessity of this remedy to arrest its progress having sprung up in his mind, he determined to put the point to the test of experiment. He had charge of a battalion of the Coldstream Guards; and as they were stationed in London, and were in constant intercourse with the lowest prostitutes of the town, they afforded him abundance of cases. He determined to treat all the primary symptoms that might occur in the regiment simply by common antiphlogistic means, and not to employ any mercury, let them have either the characters supposed to be those of true syphilis or any other. He resolved, in short,

that all should be treated without mercury. The result of his experience is contained in a paper published in the eighth volume of the Medical and Chirurgical Transactions. After he had been following this plan for the space of two years, he found that all primary syphilitic symptoms whatever could be cured without the employment of mercury: whether they were indurated chancres, superficial sores, or whatever character they might have, ordinary antiphlogistic means simply, with rest and reduced diet, were sufficient to conduct these cases to a cure; and, in fact, for that length of time he employed no mercury in the treatment of any primary or secondary syphilitic affections. He says that in most instances the cure was slower than if mercury had been employed, though in some the sores healed rapidly. It appears too that perhaps there was a greater number of secondary affections, but that those secondary affections were always mild, and that they gave way to simple treatment without mercury. Thus he established, on the clearest evidence, that mercury is not necessary; he overturned the hitherto prevalent notion of mercury being absolutely required for arresting the progress of the disease, and shewed that the disease does not possess that supposed destructive character which I have before alluded to. In my opinion this is the most important step that has ever been made towards understanding the nature of the venereal disease; and I should place the truth, thus established by Mr. Rose, in value far beyond any of the speculations or views that are contained in the work of Mr. Hunter on this subject.

In consequence of this paper of Mr. Rose, the non-mercurial treatment of the venereal disease has been extensively tried in the British army; and registers have been kept of the result of such treatment; so that I believe at the Army Medical Board there are now registers shewing the result of the treatment of the venereal disease, both with and without mercury, amounting to many thousands of cases; thus affording ample means of making comparative estimates of the two modes of proceeding; and the results, so far as the non-mercurial treatment goes, will be found sufficient to confirm the conclusions which Mr. Rose arrived at—namely, that mercury, although it might facilitate the cure under certain circumstances, was not absolutely necessary to effect it.

In other countries as well as this, similar investigations have been made with similar results; and the consequence of these inquiries has been a general revolution of opinion on the subject, and a corresponding change in practice. Persons who have the venereal disease are now no longer doomed to go through those long and severe courses of mercurial treatment which they underwent heretofore when mercury was supposed to

rank of the profession they may be; but still we cannot help thinking, that an ordinary journalist, who has avowedly paid no attention to, and knows *nothing* more about mental derangement than any ordinary observer of human nature, would more effectually bring about a reform by calmly, though earnestly, pointing out and soliciting attention to apparent deficiencies in the evidence, to sources of error or obscurity; or to the causes of conflicting testimony; by, in short, throwing all the light upon a difficult subject which his talents and acquirements may enable him to do, than by following the opposite plan of rashly dealing out judgment and condemnation on a class of men, who, whatever their faults may be, have paid at least *some* attention to the subject, and know at least *something* more about it than himself; and who, whether we consider the talent and qualifications required for the proper fulfilment of their duties, or the deep importance of the cases entrusted to their care, ought, as a body, to be raised rather than depreciated in public estimation. But leaving this part of the subject, we have still some remarks to offer on the *principle* lying at the root of the whole inquiry, and not yet, so far as we are aware, sufficiently brought forward.

Without pretending, at this distance, to decide whether Mr. Davies was really sane or insane, we are inclined to suspect, from the published accounts, that, as is usual in most disputes, both parties were somewhat in the wrong; and that, while the newspaper writers erred in holding him to be of perfectly sound mind, the *Mad Doctors* erred in not having given a sufficiently explicit or correct view of the doctrine of insanity. It is one thing, for instance, to determine that a man's mind is in a state of disease, but it is another and very different matter to determine to what extent the affection has proceeded, and whether it involves only one, or a few, or the whole of the mental powers. In the case of the stomach, for instance, we can, if asked the question, say very certainly, even in a slight disturbance of its function, that it is in a morbid condition; but that is very far from necessarily implying that it *cannot* digest food at all, or that digestion is *entirely* deranged. In like manner, abstractedly speaking, some of the ma-

nifestations of the mind may be positively deranged, but still the patient be competent to the ordinary affairs of life; for insanity is not a specific state, always marked out by well-defined lines, which, when it occurs, necessarily unfits a person for mingling in society and in business with his fellow men; but, like affections of other organs, it is a morbid state which may manifest itself in every possible degree, from the most obscure to the most striking departure from mental health. Every body knows, for instance, and the *Mad Doctors* as well as the rest, that an individual may be *palpably* and *incurably insane* on all subjects hinging upon one or two faculties of the mind, and yet be perfectly rational and sound on all others, and that in all matters of thought or of business which do not touch upon that point, he may continue for years, and even for the remainder of a long life, to display as much shrewdness, prudence, and good sense, as nine out of ten of those who never had the fear of a strait waistcoat before their eyes; and every one conversant with the insane is aware that, in practice, every possible gradation is to be met with, from an isolated affection like the above, to one involving all the faculties of the mind. And consequently the true problem to be resolved, where the rights of liberty and of property are concerned, is not so much whether mental derangement exist, but whether it has extended so far as to deprive the individual of the power of sound judgment in his own affairs. Numerous cases, indeed, exist around us of partial affections of the mind which do not interfere in any marked degree with the business habits of the patient, and in which, therefore, it would be the height of cruelty and injustice to deprive him of civil or moral liberty, but in which, at the same time, every conscientious physician, if judicially examined on the abstract question of the existence or nonexistence of insanity, would be obliged to answer in the affirmative. Many circumstances indicate this to have been the state of Davies. Some of the witnesses prove that he entertained the most extravagant notions of his own powers and importance, and that he habitually boasted of receiving illumination from Heaven, of being the Son of God, and of being under the special charge of supernatural beings, &c. It

is also proved that he was frequently flighty, wild, and incoherent, all of which symptoms might arise from morbid excitement of the single feeling of self-esteem, without the other faculties necessarily participating in the disease. And accordingly we have other witnesses who were in the habit of transacting business with Mr. Davies, giving it as their decided opinion that he was *not* insane, because "they had taken instructions from him on business, and never had met with a client who better understood his own affairs." Keeping the above distinction in view, we can see no difficulty in believing that Dr. Burrows and his brethren, in saying *on oath* that his mind was *not* sound, were giving not only most conscientious, but most true testimony; and that the jury and journalists, holding competency to business as equivalent to sanity, were equally conscientious and correct in pronouncing him to be sane. But if this be the true solution of the contradictory opinions laid before the world, it shews how careful we ought to be in understanding each other's meaning; lest like the two knights of the olden time, we come to blows about the colour of the shield, when if each had looked at the other side, he would have seen that his opponent was right as well as himself.

There is another condition involving all the faculties of the mind, which may give rise to conscientious difference of opinion, and in which the same distinction ought to be observed. It occurs chiefly in persons of a highly-excitabile and irritable temperament; who, from trifling causes, are carried away by trains of thinking or idiosyncracies of feeling, which less susceptible persons experience only after a succession of the most powerful impressions. Persons so constituted pass years of their lives apparently on the verge of insanity, without its ever becoming decided, unless a hereditary predisposition exist, in which case they generally sooner or later lapse into lunacy. In the meantime, however, they are remarkable for unequal spirits, for doing odd things, and manifesting strange feelings, but upon the whole they conduct themselves so much like other people, that although every one remarks that they have their peculiarities, few will venture to pronounce them *insane*. But in such cases when the transition to insanity does occur,

it is so gradual that the most experienced physician, even after maturest examination, is often left in doubt as to the extent to which the disease has proceeded; and while he feels that the individual is not in a condition to be left entirely to his own guidance, he is at the same time conscious that he retains too much soundness of mind not to be injured by the premature interference either of friends, of doctors, or of lawyers.

The point of difficulty for the physician, therefore, and that for the solution of which we would most ardently long for the assistance of an intelligent jury, is to determine, not the mere existence of a mental affection, but the limit at which that affection begins to deprive the individual of the power of proper self-direction, and at which, therefore, it becomes the duty of the law, and of the friends, to step in for his protection. The right solution of this problem is no easy task, for it requires in the jurors not only clearness of perception and soundness of judgment, but a knowledge of human nature, and an acquaintance with the general functions of the body, and with the previous habits and constitution of the suspected lunatic, which unhappily, under our imperfect systems of general education, very few persons are found to possess. And it is in vain to seek for any general rule to help us out of the difficulty, for every human being presents so many points of difference in mind and in body, and in the external circumstances modifying both, that every new case requires the same partial examination, the same careful analysis, and the same accurate consideration of all the attendant phenomena, as the first that ever occurred to us, and he, who disregarding all these conditions, hastens to form his opinion from the application of general rules, will inevitably fall into error, and be the cause of much misery to those who confide in him. But not to encroach too far on the patience of our readers, we shall conclude, trusting that we have said enough to satisfy our brethren that they have been too rash and reckless in exciting a clamor against the profession, and that the question in debate is really not so easy of solution as they seem to have imagined.

DESCRIPTION OF THE LUNATIC ASYLUM AT CAIRO.

By R. R. MADDEN, Esq. M.R.C.S.

ONE of the first places which I visited in Cairo was the Lunatic Asylum; Mr. Salt's janissary accompanied me, and I believe no eye hath ever witnessed, elsewhere, such a melancholy spectacle as this shocking place affords. The keeper made repeated objections to my admission; he said no Frank had ever been suffered to go in; but the name of the *hakim* of the English Consul, and half a dozen piastres to boot, removed his scruples. I was led from one passage to another, door after door was unbarred, the keeper armed himself with a *courbash*, a whip made of one solid thong of the hide of the hippotamus; and we at length got into an open court, round which the dungeons of the lunatics were situated. Some who were not violent were walking unfettered, but the poor wretches within were chained by the neck to the bars of the grated windows. The keeper went round as he would do in a menagerie of wild beasts, rattling the chain at the windows to rouse the inmates, and dragging them by it when they were tardy of approaching.

One madman, who spat at me as I passed his cell, I saw the keeper pull by the chain and knock his face against the bars till the blood issued from his nose. I forced him to desist. Each of them, as we passed, called out for food; I inquired about their allowance, and to my horror, I heard there was none except what charitable people were pleased to afford from day to day. It was now noon, and they had had nothing for the last eighteen hours.

Two well dressed Turkish women brought in, while I was there, a large water melon and two cakes of bread; these were broken into pieces and thrown to the famished creatures. I never saw "Nature subdued to such a lowliness;" they devoured what they got like hungry tigers, some of them thrusting their tongues through the bars, others screaming for more bread. I sent out for a few piastres' worth of bread, dates, and sour milk (*yaourt*); its arrival was hailed with such a yell of ecstasy as pierced the very soul. I thought they would have torn down the iron bars to

get at the provisions; and, in spite of the *courbash*, their eagerness to get their portions rendered it a difficult matter to get our hands out of their clutches.

It was humiliating to humanity to see these ravenous poor wretches tearing their food with their filthy fingers; some of their nails were so long as to resemble the talons of hawks. And such can be the condition of the "man, so noble in reason, so infinite in faculties, in form and moving so express and admirable, in action so like an angel, in apprehension so like a God; the beauty of the world, the paragon of animals." Vain boast! go paint the faculties of this paragon of animals, in the dungeons I have described; and when you have studied the institutions of Mahometan governors, sit down, if you can, with an exalted notion of human nature!

There was one thing I could not help remarking—the ruling passion of the Mahometan character was preserved even in insanity. One man, who begged me to give him bread, spat upon me when he got it; another, who seized on the piece of water melon which the women brought him, with all the eagerness of famine, abstained from eating it; hungry as he was, he preferred flinging it at a Christian's head rather than satisfy his craving stomach.

He concealed it for near a quarter of an hour, till I was opposite his window; he then thrust his naked arm through the bars, and threw it in my face. In spite of my entreating he got the *courbash* round his uncovered shoulders.

But there was one old man, who moved not when the food was distributing; and as I looked into the dark cell, destitute of every thing, with neither straw, nor carpet, nor clothing of any sort, I could barely distinguish an emaciated form, in a half recumbent position, lying on the bare earth, without a rag upon his body. He could not lie down altogether, for he was chained by the neck to the window; and, whether it was the pressure of the chain, or the rattling of death in his throat, I knew not, but the noise was that of a person in the last convulsions; and, on inquiry, I found he was dying. The smell of the apartment was most horrible; every species of filth had accumulated round the dying man; for, in all probability, he had been many days immovable. I had only sufficient influence

to prevail on the keeper to take off the chain. I gave some piastres to buy straw; but two days afterwards, when I sent the janissary to inquire about this poor wretch, he was dead, and there was no straw in the apartment. I observed a very decent looking Turk in one of the cells, who had been an officer in the Pacha's troops; he complained bitterly of hard usage; he said he was famished; some days he had only five paras worth of bread, or half a penny worth; and he talked altogether so rationally of his condition, that I expressed my wonder to the keeper that he was not suffered to go abroad. The keeper laughed at my ignorance: "You do not know," said he, "that when mad people appear most quiet they are always plotting mischief." He illustrated his assertion by a story, which, if credible, certainly shewed the necessity of confining lunatics, however mild, to their apartments at night. A black man, who followed the trade of a butcher, had been confined there many years ago; his madness was of so mild a character, that he was allowed the range of the house, with two or three others, whose derangement was attended with no violence. One night the black butcher secreted a knife; he induced another madman to enter his cell, prevailed on him to lie down, and cut his throat; he then cut him up into quarters, and distributed the joints about the room, as he was in the habit of arranging the meat in his shop. He invited all the others to buy their meat at his stall; and to those who were chained, he carried such portions as they desired. The keeper was disturbed with their rejoicings; it was the first full meal they had had for many a long day. On examining the cells he found one man missing; he asked the black butcher if he had seen him, and he replied, that he had just sold the last joint. "Since that time," said the keeper, "we look out better; otherwise they would eat one another every day." I endeavoured to ascertain the causes of the madness of the present inmates; they were thirteen in number, and all males; four of them had gone mad from smoking *hashis*, an intoxicating production, being the small pistils of the flax plant; five of them had poison administered to them; to two of them in the shape of invigorating medicines, composed of Spanish flies; and to the other three in

coffee, drugged with deleterious ingredients; three were rendered insane by fanaticism; and one went mad after being bastinadoed.

There is no country where insanity is so frequent as in that country where intellect is most cultivated—in England; and there is no nation where madness is so rare as in Turkey*, where the people, of all others in the world, think least. There is an Arab proverb, which every unfortunate man applies to his calamity, and which preserves him from despair: "He who has health should hope; and he who hopes can never remain unhappy." The degree of suffering which disorders the intellect of an Englishman, only calls forth the philosophy of an Arab; and where the former cuts his throat, the latter contemplates his misery, and exclaims *Allah Karim*, "God is great." I saw an Arab surveying the ruins of his house, at Rosetta, which had just fallen; and the only exclamation which escaped his lips was, *Allah Karim*, God is great. An Englishman, in the employment of Mr. Galloway, threw himself into the Nile; his companion besought the Arabs in the boat to endeavour to save the man; but the Arabs, with one accord, lifted up their eyes and exclaimed, "*Allah Karim*," and the unfortunate man was drowned. I saw an Arab Sheik, in Alexandria, follow the corpse of his only son, who died of the plague; and, as it was carried out of the house, he caused the bier to be set down, to have one more look at his lost child. I saw the features of the old man convulsed for a moment; but all he said was, "*Allah Karim*!" and all the bystanders repeated the same. In short, the religion of the Turks tends much to resignation; as they believe no human foresight can prevent misfortune, they make a merit in supporting that misfortune with courage: but the Arabs, in this respect, carry their philosophy much farther than the Turks, and, indeed, surpass the latter in intelligence, morality, and gentleness of disposition. I never knew an instance of suicide either in Turkey or Egypt, and I never heard of a Turk or Arab going mad from desperation, arising from misfortunes.

Now the great cause of insanity in

* Fatuity is, however, frequent enough: but as fools are revered as saints, idiocy is very often shammed.

all countries, except Mahometan ones, is fanaticism; and one would think, *a priori*, where religious zeal is so strong as in Turkey, that insanity would be most frequent; the reverse, however, is the fact. The reason is this:—their fanaticism is founded on essential doctrines of faith, which neither admit of doubt nor disputation; they all believe that they are certain of salvation sooner or later; and this reflection soothes every mortal anxiety. But with us, fanaticism is altogether on a different basis, and insanity is consequently more prevalent than it formerly was in France; probably two-thirds of the insane in England are religiously mad. The report of the Cork Lunatic Asylum, published a few years ago in the *Edinburgh Review*, proved that madness was only prevalent in those districts where the ranters were most numerous. The physician of a lunatic asylum in Paris assured me, that, since the revolution, the greater number of lunatics were females, in the proportion of two women to one man; and the reason he gave for it was this:—since the revolution, the churches are only frequented by women: for one man that you see in a church in Paris you may count a dozen women. There the clergy, to preserve any part of their flock, are obliged to practise on the enthusiasm of the women; and not content with making them religious, they render them devotees.

The poetry of religion, of which no church possesses more than the Catholic, is one of the adventitious aids of ecstasy which often elevates the female mind beyond the region of sober reason. In England, I repeat, fanaticism takes another turn: it has none of the poetry of continental enthusiasm, and none of the consoling security of Turkish fanaticism. It is mere prose—the madness of proselytism without the inspiration of faith.

With us the fanatic wavers with the wind of every doctrine; and while he works heaven and earth to gain his neighbour to his sect, his own bosom is distracted with a thousand doubts and scruples. His anxiety for his neighbour's soul undermines his own intellect at last; and thus fanaticism paves the road to Bedlam.

I endeavoured to explain to the keeper of this wretched hospital the necessity for gentler usage and more humane

treatment. I told him by such means many insane people were restored to reason; but he shook his head, and said it was impossible; nothing would do but the courbash; besides, the only object was confinement, to prevent them from doing mischief; and *Malakh*, “what matter,” whether they recovered or not?

Niebuhr mentions the *Mouritan* hospital for the sick and mad; but it is evident he did not visit it. He says, “the patients were provided with every thing to soothe their distress, not excepting even music.” Alas! they have not bread, much less music*.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abréger.”—D'ALEMBERT.

A Popular Summary of Vaccination, &c. By JOHN MARSHALL, Esq.

THE introduction to this little work informs us that its object is to bring into a narrow compass the principal causes of vaccine failure, in the hope of removing those doubts which have been too frequently thrown upon the practice of vaccination. Though calling itself a popular summary of vaccination, it is by no means calculated exclusively for the general reader. On the contrary, one of the principal designs of the volume is to impress upon the minds of medical men the peculiar nicety required in the management of the vaccine disease. The very circumstance of its mildness appears to the author to render great delicacy of manipulation essential to its management.

Though containing only ninety-five pages, the treatise is subdivided into no less than thirty-one sections. Facility of reference to the prominent objects of interest is stated as the reason for this minuteness of subdivision. The author has enjoyed very abundant opportunities of acquainting himself with the subject. For many years he was connected with Dr. George Pearson's cow-pock institution in Broad Street, Golden Square; on the decline of which he was appointed

* From Madden's Travels.

one of the district vaccinators to the national vaccine establishment. A large proportion of the practitioners in the west end of London are indebted to Mr. Marshall's station in Jermyn Street for their supply of lymph. The opinions of a man, circumstanced as Mr. Marshall is, are worthy of note; not only because his practice has been extensive, but because he acts so immediately under the direction and patronage of the National Vaccine Board.

We shall draw the attention of our readers to some of the points touched on by Mr. Marshall, remarking previously that all the principal questions connected with the theory and practice of vaccination are here very fairly met; that the greatest candour is displayed in discussing them; and that the work is really calculated to be popular in the best sense of that term.

In section six the author states it as his opinion that the vaccine lymph is not deteriorated by numerous transmissions through the human constitution. The perfect accordance of the vesicles of the present day with the colored engravings made at the commencement of the vaccine practice, abundantly attest the correctness of this principle. It is only surprising how generally the opposite notion has been taken up, and how pertinaciously it is still supported by some persons. The question as to the permanence of vaccine security is then considered; and after two pages of argument the doctrine of temporary protection is declared to be absurd. Now, with every respect for Mr. Marshall, we cannot see any absurdity in such an opinion. The opinion may be erroneous, but there is nothing intrinsically absurd in it. We can give no reason why vaccination affords security against small pox, and not against measles; and it certainly might have pleased the divine framer of the human constitution to limit the influence of vaccine security. Analogy, it is true, does not favor the supposition, but that does not settle the question. Mr. Marshall adds, that the disease, by never returning to the animal from whence it springs, affords another proof. Is this fact, we would ask, clearly ascertained? Facts alone can be trusted to; and we confess that the increasing number of cases of small-pox after vaccination which distinguishes the present practice, affords strong confirmation to the notion of a diminished

security as life advances. Of this, at least, we are sure, that many persons who have taken small-pox of late years after vaccination, have been frequently exposed to it before without injury.

The period of taking the lymph is truly designated by Mr. Marshall as a point of infinite importance; it cannot, he says, be used too early. In this respect vaccination is diametrically opposed to inoculation. Dr. Dimsdale, the *crack* inoculator of his day, never took matter until the pock was turned. Mr. Marshall argues against employing ninth day virus; and, indeed, one of the main objects of the work is to shew the errors that have arisen from the use of what the old pathologists would have called well-concocted matter. The remarks contained in this section (the eleventh) appear to us perfectly just and highly important. We may say the same of the next section, which treats of the proper number of vesicles. Five punctures are here recommended in each arm. Some hints on the surgery of vaccination, to be found at pages 56, *et seq.* are extremely good, and prove the minute attention which the author has paid to the subject.

At page 62 a singular case is detailed, in which the cow-pox appeared to give rise to a vesicular eruption. We cannot help suspecting that this was a varioloid, and not a vaccine eruption.

Some observations on the vaccine cicatrix, contained in section 29, appear to us particularly worthy of attention. Several instances are there given of perfect vaccinations leaving very ill-defined scars. A case is detailed (page 86) wherein revaccination took complete effect, though the scar was regular; while an elder brother, having on his arm a very imperfect scar, took the modified cow-pox. This seems to shew that the reliance usually placed upon the aspect of the scar is very equivocal; and the more we see of cow-pox the more strongly we are convinced of the truth of this observation.

Mr. Marshall is decidedly an advocate for revaccination in all suspected and doubtful cases; and we are inclined to side with him in this, as in most of his other practical suggestions. The French, indeed, object to it; but we cannot therefore consent to depreciate our own country, and to say, with Mr. Marshall, that the practice of revaccination applies *exclusively* to Great Britain. We are

sorry, in truth, to find a writer of sense, like Mr. Marshall, adopting this line of argument. Foreigners, he says, accept with thankfulness the boon which the countrymen of Jenner refuse, and foreign climes have now more to fear from us than we from them. This is sad cant. We will venture to affirm, that there were not one hundred persons inoculated for small-pox in London in the year 1829, and that not less than fifteen thousand were vaccinated. If vaccination is less favorably received in the provinces, we ought to remember that they have not the same facilities provided for them, either by the liberality of government or the benevolence of individuals. Instead of railing at the prejudice and ignorance of the provincials, let us study to obtain for them the advantages which the metropolitan public enjoy, and we shall soon find that their obstinacy and bigotry will cease. Where vaccination is objected to, it will generally be found that the fault lies with the medical men, and not with the public. The lymph which they supply is inert. Many successive trials are made, and made ineffectually. The child is, at length, imperfectly vaccinated, and takes the small-pox in after life; and then we rail at the obstinacy, the bigotry, and the prejudice of the parents!

Then as to this alledged superiority of foreign countries: has Mr. Marshall been in Paris, or Amsterdam, or Lyons, and satisfied himself that there is less small-pox there than in York or Oxford? We know that small-pox does exist in these places, and that the mandates of the most despotic government are not able to prevent its occasional appearance.

We must not part, however, with Mr. Marshall in ill humor. We have been much pleased with the work, and can strongly recommend it to our readers. Though the facts and opinions which it contains lay no claim to originality, the subject is neatly and concisely handled. The object of the author was to improve the practice of vaccination, and to strengthen the public confidence in its utility; and we think the work well calculated to answer these most praiseworthy intentions.

Researches principally relative to the Morbid and Curative Effects of Loss of Blood; by MARSHALL HALL, M.D. F.R.S.E. &c. &c.

[Concluded from page 696.]

PART II.

The Curative Effects of Loss of Blood.

DR. HALL observes in the second part of his work, that it is one of the most remarkable facts in physic—and we would add, the due knowledge of which is likely to prove one of the most useful—that if several patients of similar strength and constitutions, but affected by dissimilar diseases, be respectively placed in the erect position, and bled *ad deliquium*, they will be found to have lost very various quantities of blood. This fact, simple as it is, with its rationale and practical applications, has, he thinks, been greatly overlooked.

“Its rationale is to be found, I believe, in connexion with an equally interesting fact, that different diseases induce in the constitution different powers or susceptibilities in regard to the effects of the loss of blood. Each disease appears, indeed, to possess its own peculiar and intrinsic virtue in this respect. This is determined by placing the patient perfectly erect, and bleeding to incipient syncope; the quantity of blood which flows is the measure of the protective influence of the disease in one class of cases, and of its influence in superinducing a susceptibility to the effects of loss of blood in the other.

“An interesting scale of diseases may be formed representing these properties. It would begin with congestion of the head, or tendency to apoplexy; inflammation of the serous membranes, and of the parenchymatous substance of various organs, would follow; then acute anasarca; and lastly, inflammation of the mucous membranes. This part of the scale would be divided from the next by the condition of the system in health. Below this would be arranged fever, the effects of intestinal irritation, some cases of delirium, reaction from loss of blood, and disorders of the same class with hysteria, dyspepsia, chlorosis, and cholera morbus.

“Persons in health and of moderate strength will generally faint if bled in the erect posture, on taking fifteen

ounces of blood. I have known seventy ounces to be taken in the sitting posture, in the tendency to apoplexy, without syncope; but the case is an extreme one. Patients with pleuritis or pneumonia frequently lose thirty-five ounces of blood without fainting. In bronchitis little more is borne to be lost than in health. A stout person in fever will frequently faint on losing ten, twelve, or fourteen ounces of blood. In intestinal irritation, with urgent symptoms even, the abstraction of nine or ten ounces of blood will generally induce deliquium. In delirium tremens, or puerperal delirium, the patient soon faints from loss of blood. The same thing is still more observed in those cases of violent reaction which arise from loss of blood itself. In dyspepsia, hysteria, and chlorosis, the susceptibility to syncope from loss of blood is very great. And I have known a patient, of good strength, affected with cholera, faint on taking four ounces of blood, although she had shortly before borne to lose nearly twenty ounces without faintishness, under the influence of inflamed mamma."

According to these views, and indeed constituting a part of them, we find the inference that patients laboring under those diseases which require bleeding most, bear the abstraction of the largest quantity; and, *vice versa*, those whose complaints are not benefitted by blood-letting, do not admit of any very copious abstraction without fainting—thus, as it were, putting a limit to the mischief which venesection injudiciously practised is likely to produce.

It needs no comment to shew that a knowledge of this fact will enable us to distinguish from each other two of the most important classes of disease—internal inflammations and those diseases which so nearly resemble them—to the latter of which Dr. Hall gave some years since the appropriate term of "mimoses." We doubt not that if our medical brethren would keep a register of cases, according to the plan suggested by Dr. Hall, our knowledge of disease, and its appropriate treatment, would be greatly increased.

Our author next endeavours to point out the difference between pure fever and pure inflammation, and observes that the former seems to be an affection of the whole nervous and vascular sys-

tems; while in inflammation there is an affection of these systems in one part or organ. With regard to the first part of this position, there may be differences of opinion; and even in what follows the reasoning is somewhat speculative. "There is another difference between these two diseases; fever appears to consist in an affection of the nervous system and of the heart and larger arteries, the capillary vessels being only affected as an extension of this morbid state. In inflammation there is, according to the experiments of Dr. Wilson Philip, and Dr. Hastings, a primary affection of the capillary vessels, consisting in enlargement of their diameter and a slower movement of more numerous globules of the blood. A consequence which flows from this view of the subject is, that to subdue momentarily the state of fever, we have only to subdue the augmented action of the heart and larger arteries; but as the capillary circulation is less immediately under the influence of the heart, the action of the former may be subdued, whilst a morbid state of the latter may be continued with comparatively little change.

"It is upon this principle, I believe, that a fact is to be explained which will be frequently adverted to in this work, that syncope is more readily produced by the abstraction of blood in pure fever, and in other diseases consisting alike in the state of the heart and larger arteries, than in pure inflammation, consisting in a peculiar condition of the capillary vessels, more permanent and less under the influence of the general circulation."

According to this view, syncope is simply the effect of depriving the heart and arteries of their accustomed stimulus under circumstances of augmented susceptibility of the nervous system to impressions of this kind; inflammation is a sort of concentrated and permanent stimulus, and although blood may be taken away and the action of the arteries thus subdued, yet from a less degree of susceptibility of the nervous system, and from the unsubdued morbid action of the capillaries, syncope is not so soon induced by the abstraction of blood.

In concluding this chapter the author quotes at length, preceded by high and well-merited eulogy, the interesting paper published by Mr. Heming in this journal (No. 93).

It is stated that inflammation of the bronchia, or of the mucous lining of the bowels, has not appeared to protect the constitution in an equal degree from the occurrence of syncope on the deduction of the blood as inflammation of serous membranes and parenchymatous substances. Those cases resembling arachnitis, pleuritis, peritonitis, &c. are treated of at considerable length under the head of irritation; and the difference between the true and spurious diseases (if we may so term them) is strongly shewn by the fact that "in cases of arachnitis, pleuritis, and peritonitis, thirty, forty, and even fifty ounces of blood may flow before the slightest deliquium is observed; in those cases resembling them there is frequently the most perfect syncope on abstracting nine or ten ounces of blood!"

Some useful observations are next made on the impropriety of bloodletting immediately after accidents or operations; and having thus disposed of the cases in which it ought not to be employed, Dr. Hall proceeds to discuss the manner of rendering this powerful means most available in the treatment of disease.

"The question of the due institution of bloodletting, not only involves more serious consequences, but also more principles of the practice of physic, than any other. Every circumstance in the condition of the patient, in the nature of the disease, and in the effects of remedies, requires to be weighed with the utmost accuracy; for the neglect or misapplication of this remedy, or its inefficient or undue institution, or repetition, may allow the disease to acquire an overwhelming power, or plunge the patient into a hopeless state of exhaustion.

"But the extreme complexity of this last question can only be properly estimated by reflecting upon the varied, nay the innumerable, modes in which the three circumstances of the condition of the patient, the nature and character of the disease, and the effects of remedies, may be combined.

"The circumstances of the constitution of the patient, and the effects of remedies being the same, each disease possesses, as I have already stated, its own peculiar power or susceptibility in regard to the effects of loss of blood, both immediate and remote.

"This power and this susceptibility

of the system in regard to the effects of loss of blood, may generally be determined by placing the patient very erect, perhaps with the eyes turned towards the ceiling, and taking blood from a moderate-sized orifice, until the first or slightest appearance of syncope be induced; the quantity of blood which thus flows, denotes that power or that susceptibility respectively.

"It then becomes a question whether the quantity of blood permitted to flow before the first appearance of approaching syncope is manifested, be the precise quantity which ought to be taken. I think it is so, with certain limitations, in the greatest number of cases, the power of the system being exactly in proportion to the necessity for bloodletting and its susceptibilities, to the caution required in the administration of this remedy."

We do not think there is the slightest danger in bleeding to complete syncope in inflammatory cases, whatever may be the quantity of blood required to be lost, provided the circumstances which Dr. Hall has pointed out he strictly adhered to. In one case we remember to have taken $\frac{3}{4}$ vi. of blood before the patient fainted. We would not have mentioned this circumstance, but we think it necessary for the cure of some internal inflammations to produce *absolute* syncope, nor do we think it unsafe when bloodletting is performed as Dr. Hall has advised.

On the other hand, the author in the strongest terms reprobates bloodletting as a *preventive* of inflammation. "It has frequently been proposed to repeat the remedy by way of preventive and security against a return of these symptoms. Of all the cases in which bloodletting has been substituted, none is so replete with danger!"

The following remarks on "early bloodletting" deserve attention:—

"Some medical writers have attempted to fix and to limit the dates at which it is proper to institute bloodletting. To do this really, is utterly impossible.

"Most diseases may, indeed, be divided into the stages, 1. of accession; 2. of full development; 3. of disorganization of the part or parts affected; and 4. of deterioration or failure of the powers of the general system. It is very essential to bear this view in mind, whenever we may be required to determine the question of bloodletting.

It will guide us far better than days or dates. If the disease be formed, and not merely expected, the earlier the lancet is used the better. If it be fully developed, bloodletting is still more required and even better borne. It is when disorganization is great, and the powers of the system are shaken, that it requires the utmost caution and skill to conduct the treatment of the case.

"Early in the disease, a single bloodletting to syncope will often prove sufficient for the cure. If this remedy be employed later, it will usually be necessary, and safe, to repeat it.

"The first stage of apoplexy is that which precedes the attack. The attack itself is frequently one of disorganization. On this, failure of the functions and powers of life, speedily follows. In the first stage, a single bloodletting to syncope, always a large one, perfectly relieves; in the second, bloodletting is neither so well borne nor so efficacious; it must be repeated, and it must be conjoined with the local abstraction of blood and other remedies.

"In arachnitis, an early bloodletting to syncope, also always a large one, is frequently equally efficacious; but if the disease has become fixed by delay, it will always be necessary to repeat the remedy, perhaps several times.

"In pleuritis and pneumonia, one early bloodletting to syncope frequently subdues the disease entirely. At a later period, it is usually necessary to repeat the bloodletting.

"In peritonitis, especially if the intestines be involved in the disease, it is very essential to observe that the feet are warm before the rule respecting bloodletting is adopted; otherwise syncope may take place before the due quantity of blood is taken.

"In bronchitis and in dysentery, bloodletting is neither so well borne nor so efficacious, although instituted early, as in pleuritis or peritonitis. Laryngitis constitutes an exception to this remark as extended to the inflammation of the mucous membranes in general; in this case it is probable that the brain suffers from the impeded respiration.

"Early bloodletting is of the utmost service in fevers. It may be a question whether this remedy be proper in irritation, but I incline to recommend one early use of the lancet. In the reaction from loss of blood, the topical application of leeches, or of cupping, is fre-

quently of great service; general bloodletting is of course excluded."

The volume is concluded by observations on late bloodletting, local bloodletting, and bloodletting in infancy and childhood: of the author's remarks on the latter subject we cannot speak too highly; indeed it must be abundantly evident from the tenor of our analysis, that we entertain a very favorable opinion of the work as a whole.

MEDICAL GAZETTE.

Saturday, March 6, 1830.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

MEDICAL ATTENDANCE ON THE POLICE.

WE beg to direct the attention of our readers to the contents of a letter in our present number (page 714), on some points connected with the proposed methods of providing medical and surgical attendance for the members of the new police. Applications have been made by the Secretary for the Home Department to various public charities, and an expectation seems to have been entertained that the Governors of such establishments might be induced to receive the policemen on terms more favorable than those granted to ordinary patients. But as the advantages afforded to the public at such institutions are already as great as experience has shewn to be consistent with their stability, it is obvious that no favor can be shewn to the government patients, except at the expense of those recommended by the private subscribers. The only manner, therefore, in which the members of the new police establishment can fairly become entitled to attendance at our public medical institutions, is for the government to become subscribers on their behalf, receiving advantages in proportion to the amount, precisely in

the same way, and to the same extent, as ordinary contributors. Not only ought the Governors of public charities to listen to no terms less favorable than these, but it appears to us very doubtful whether even this arrangement would not be injurious to the great majority of our medical charities, and for the reason above alluded to—namely, that the advantages offered to subscribers are already calculated at the highest rate compatible with safety, and on the supposition, derived from experience, that the full amount of these benefits will not be demanded. For instance—if every subscriber to an hospital or dispensary had always as many patients actually in the house, or in attendance, as he is entitled to by his contribution, we doubt very much whether such institution—to borrow a phrase from the sister kingdom—would not “gain a loss” by such supporters. We have known many cases in which the amount of annual subscription, where individuals have availed themselves of their privileges to the full extent, has been repaid by the charity many times over in the course of the year, in medicines alone, to the patients so recommended. Now we suspect that the government patients will be very much of this nature. Calculations will be made, to ascertain the average number of sick likely to occur in different districts; and just so much, and no more, will be paid towards the charity, as, by its existing laws, will entitle the requisite number to medical attendance.

Our correspondent mentions several institutions to which application has been made, and we know that at some of these, where the answer returned was, that the policemen would only be received on the same terms as ordinary patients, no more was heard about them,—a circumstance which leads us to suppose that better terms were expected.

It would be injudicious then, in our opinion, on the part of the Governors of

public charities to offer any advantages to the police; nay, we hold that to do so would be a violation of their implied contract with the public, and an abandonment of the purpose for which all charities profess to be established—namely, the benefit of those who have no other means of obtaining relief.

But while these arguments against the admission of the police into our public charities, at any reduced scale of contribution, are derived from contemplating the subject as regards the governors and patients of such institutions, there are others of a different nature, which come more home to most of our readers, and to ourselves as members of the medical profession. The governors of hospitals may have a right to fill their establishment with patients—but in dispensaries there is not the same limit to the number of patients, and we doubt whether the governors have, either morally or legally, a right to sell and barter the services,—the *gratuitous services*, of their medical officers, without even asking their consent! In such a charity, for example, as the Westminster Dispensary, alluded to by our correspondent, where the patients are numerous, and the visiting district extends from Temple-Bar to Tyburn; is it to be tolerated that any agreement connected with attendance on the police should be entered into without the consent of those who are to attend them?—that any such addition to their duties should be imposed without their express concurrence? Yet such we are informed is the fact; and that already between twenty and thirty are in daily attendance. It appears the more extraordinary that such a step should have been taken without the full consent of those chiefly concerned, inasmuch as the mode adopted is not similar to that which prevails with regard to the reception of other patients; but consists in a kind of contract, by which the charity is to receive thirty pounds a-year

for the medicines and attendance required by 400 men, of whom as many have already, in a few weeks, been admitted, as are usually sent in the course of the year by Governors contributing the same sum annually. There exists no profession in which so much is done gratuitously as in ours; but this is carrying the principle somewhat too far—it is really “too bad,” that the time and talents of medical men should thus be bought and sold; and we advise the officers of other institutions to be on their guard against the adoption of a similar measure. Indeed, in the Dispensary alluded to, it is for the physicians and surgeons to consider whether they will suffer themselves to be thus trampled upon—whether they will, without any recompense, undertake duties not comprised in those of the offices they severally hold, and whether they will submit to the new set of masters thus placed over them; for they may rest assured that complaints, should any real or supposed neglect occur, will be made in a higher quarter than the Governors of the Dispensary. If the police, who, as our correspondent justly observes, are men employed in the service of the state, and supported at its expense, are to be provided with medical attendance by the officers to our public charities, let this be a separate and supplementary duty, and paid for accordingly. This, which we recommend for general adoption, on account of its obvious justice and propriety, has already been practised in some instances. At the Small-Pox Hospital, for example, the medical attendant has had his salary raised to a hundred guineas, in consequence of the additional trouble which the admission of some policemen into that establishment is likely to give him. The remuneration is moderate, but at all events it shews a respect for professional property on the part of the Governors. We would rather not see

the police at all connected with *charitable* institutions; but if it is to be so, let the medical men who attend them be paid for their labor, as all other servants of the government are.

PROPOSED PUBLIC DINNER.

WE are glad to find that the injudicious proposal to celebrate the late decision in the cause *Handy v. Henson*, by a public dinner, is likely to prove abortive. We can confidently state that the most influential practitioners in London entirely disapprove of the measure, and that, if the dinner take place at all, it will be attended by few, if any, respectable persons. We happened to be present at a medical bookseller's, a few days ago, when a gentleman took up a paper left for the signature of those who purposed to attend the dinner. He asked—“Where did you get this?” “It was sent here from the *Lancet Office*.”—“How long have you had it?” “A week.”—“How many have signed it, or given their names?” “Not one, sir.”

Probably the measure would not have succeeded, at any rate; but the manner in which Wakley has endeavoured to identify himself with it, has ensured its failure.

ROYAL INSTITUTION.

February 19th.

On the Comparative Advantages of various Vapors as Moving Powers.

MR. AINGER this evening entered into an examination of the comparative advantages of using the vapor of other liquids, besides water, for generating steam as a motive power for engines. He observed, that as many liquids, *e. g.* alcohol and æther, boil at a lower temperature than water, it had been proposed to use them economically instead thereof; it having been assumed that the minor consumption of fuel would more than compensate for the extra cost of the fluid. But he successfully shewed, we think, that even were alcohol and æther furnished to us as cheaply and abundantly as water, they would be less advantageous than that fluid for the purposes of the steam-engine, on account of the much less volume of

steam which a given quantity of either will produce, which volume diminishes in a greater ratio than the diminution of the temperature at which it is formed.

Mr. A. likewise alluded to the sanguine expectations which, as soon as Mr. Faraday had succeeded in condensing carbonic acid gas into a liquid form, had been entertained by many persons, of its application to machinery as a motive power, and he shewed a sketch of the apparatus, designed by Mr. Brunel, for that purpose; but which, from the plan of recondensing the liberated acid, seemed little likely to succeed. We cannot but think that as carbonic acid gas can be cheaply generated in closed tubes, and thus reduced by its own pressure into the liquid state, it would be more feasible to suffer it to escape after its power has been applied, than to endeavour to recondense it in the cylinder of the engine. Perhaps, this might be done somewhat on the same plan as that shewn by Mr. Fordham here three weeks ago, and in which he had most ingeniously contrived to use condensed atmospheric air as his motive power. Mr. F., whose observations we did not at the time report, proposed to condense five atmospheres of common air into copper tubes, such as are used for portable gas, and to take in a fresh supply at every stage, instead of laying in coals and water, or changing horses. The advantages held out in this plan by the inventor are,—1st, the great diminution of weight to be carried, needing neither engine, coals, wood, nor engineer; 2dly, security against those accidents to which steam-engines are so liable, as if any did occur it must be while filling the tubes at the stations, and not when applied to the carriage for use; the tubes also would be proved to more atmospheres than they ever would be allowed to contain; further, although filled to five atmospheres, not more than two would be usually employed, so that on going up hill, or where any difficulty occurs, an extra power of more than double can in a moment be ensured; or the ordinary force in a like manner could be lessened by the greater or less revolution of the stop-cocks. Of the ultimate success of power-carriages, even on common roads, we do not despair, indeed we have no doubt. Perhaps the day is not far distant when a traveller will change his engine instead

of his horses; but none of the machines that we have yet viewed should we mount with half the confidence that our foot greets the stirrup, nor should we listen to the hissing steam with a moiety of the complacency that we hear the crack of the coachman's whip.

Specimens of Oak.

On the table in the library we recognized the specimens of oak which Mr. Burnett had exhibited in the theatre on a previous evening, to illustrate his observations on that subject. The superiority of the better specimens of English naval oak on close examination is very apparent, and the portions both of it and of the French and Norway, which had been subjected to his tests of maceration, freezing, &c. still more strongly proved its power of endurance. The splinter from the oak which had been struck by lightning, was noticed by some of the naturalists present as one of the finest examples of the force of electricity which they had seen. The note attached to it was as follows:—"Splinter from a fine oak, about nine feet in circumference, struck by lightning in July 1828. The boughs were all rent from the trunk and scattered around; the body of the tree entirely stripped of bark, and the wood shivered through the heart, so that the hand and arm might be inserted, and splinters of several feet long, by two or three inches thick, easily pulled out."

Sir H. Davy's Method of defending Ships' Bottoms.

The barnacles, sea-weed, &c. from the bottom of one of the ships which had had its coppers defended by zinc, on Sir H. Davy's plan, were also on the table. They are interesting relics, particularly so, as shewing how many untoward circumstances may interfere in the practical application of the most beautiful and correct philosophical discoveries. The object proposed—viz. the defence of the copper—was perfectly attained; but the very defence rendered it so attractive of marine animals and sea-weeds, as absolutely to affect the vessel's sailing. The matter is still more interesting at the present time, when that great philosopher, so lately dead, not only reaped no benefit from this discovery, but the failure of it, by some, is thought to have affected his health, and not impossibly to have

shortened his life. Yet now we hear that a patent has been lately secured, for covering ships' bottoms with iron plates defended by zinc, entirely on the same philosophical principles; and which, besides the immense advantage as to cost, it is stated will not be subject to that accumulation of filth which frustrated the beautiful scheme of Davy, and rendered its application of non-effect. So that some ingenious adapter will reap a splendid reward, while, save fame, the truly scientific discoverer had none.

HOSPITAL REPORTS.

LONDON HOSPITAL.

[Diseases of the Heart connected with Rheumatism, continued from page 703.]

Ossification of the left Auriculo-Ventricular Valves after repeated attacks of Rheumatic Gout.

JOHN JONES, æt. 22, of a spare habit and sanguineous temperament, with a pale countenance and projecting sternum, commonly denominated chicken breasted, was admitted into the hospital on the 17th Oct. under the care of Dr. Billing. He states that he has at different periods been attacked with rheumatic gout, both in the upper and lower extremities; and that about fifteen months ago he was entirely deprived of the use of his limbs for a fortnight. He suffered much about five months ago with dyspnoea, attended by a slight cough, and with palpitations at the heart, which have increased much within the last three months, and are always aggravated by the least motion. On applying the ear to the parietes of the chest, over the left side of the heart, the bellows-sound is distinctly heard, and an impulse is communicated to the head of the observer. Pulse, at the wrist, 96, and small; appetite good; much thirst; night sweats; bowels relieved four or five times daily; urine free and clear.

V. S. ad 3xvj.

Vesic. reg. cordis.

He bore the bleeding well; breathing is easier; palpitations not so frequent, and the bellows-sound is less noisy; Pulse 84.

Infus. Gent. Comp. ter die.

Cal. c. Rheo. ℥j. alt. aur.

20th.—Sleeps well, and continues improving.

Contin. Med.

24th.—Cough has increased since the 20th.

Infus. Ung. Ant. Tart. reg. cordis.

Contin. Med.

27th.—The ointment has produced an eruption; cough very troublesome, and prevents his sleeping; countenance very pale. The bellows-sound continues, and a double pulsation is now felt at the wrist.

Pulv. Opii. gr. j ter die.

Ol. Ricini. om mane si opus sit.

Rept. Ung. Ant. Tart.

Omitt. Alia Med.

31st.—Orthopnoea chiefly at night; cough more severe.

Nov. 3d.—Is now very much distressed by the great difficulty of breathing.

Setaceum reg. cordis.

7th.—Incessant vomiting came on yesterday, which was in some degree relieved by a dose of the tinctura opii.

8th.—He died last night at 12 o'clock.

Post mortem Examination.—Thorax.—The pleura costalis was found adhering to the pleura pulmonalis, and in some places the adhesions were exceedingly firm. The pericardium adhered throughout to the surface of the heart. The right auricle was healthy; the right ventricle was a little hypertrophied; and the internal coat of the pulmonary artery was very red.

The left auricle was considerably hypertrophied; the left auriculo-ventricular valves were so much ossified as to leave a small fissure, into which the point only of the dissecting scalpel could be introduced. The left ventricle was slightly hypertrophied, and the ostium of the aorta, as also its thoracic portion, appeared of a less calibre than natural. The lungs were much congested.

Abdomen.—A little fluid was found in the abdomen; the liver was enlarged, and gorged with blood; the other viscera were healthy.

Head was not examined.

Disease of the Heart after Rheumatism.

Joseph Howard, æt. 40, a weaver, emaciated, countenance of a leaden hue, and expressing great anxiety, was admitted on the 4th of February, under the care of Dr. Billing. He reports that he had been the subject of rheumatism about fourteen months ago, and that his present illness came on about ten months ago, with severe pain in the left side of the chest, after lifting a heavy weight; he obtained relief by being repeatedly cupped, and by taking mercurial pills until ptyalism was produced.

He now complains of dyspnoea, which is much increased by motion; of pain, and a feeling of tension in the region of the heart, and of some tenderness on pressure; and of a great tendency to syncope after fits of coughing, which are very violent, and attended by a slight mucous expectoration. The ronchus sonorus gravis and mucosus are

heard on both sides of the chest; the respiration is puerile on the right side, and indistinct on the left; percussion gives a duller sound on the left side than on the right; and the left side is found to give half an inch more than the right, on measuring from the spine of the vertebra to the xyphoid cartilage. The heart's pulsation is felt over a considerable extent of the anterior thoracic parietes, and the bellows-sound is heard on applying the stethoscope over the situation of the left side of the heart. Decubitus always on the left side. Pulse 120, hard and irregular.

V.S. ad 3xvj. statim.

*Mist. Ant. Tart. 3ss. om. horâ.

Milk diet.

5th.—He feels a little better to-day; had one very copious loose motion, and was sick in the night; nausea is produced by the medicine; cough not so troublesome; respiration the same as yesterday, but with less ronchus; heart's action continues the same; pulse 120, hard, and weaker than yesterday.

Omittr. Medicamenta.

Tinct. Digit. 3ss. ter die, ex

Infus. Gent. Comp.

Vesic. lateri dolente.

Middle diet and rice pudding.

9th.—Less pain of side; cough very troublesome; dyspnœa is now increased to orthopnœa; lips somewhat livid; great faintness, and he feels very chilly; respiration laborious, and about 60 in a minute; action of the heart the same; pulse 120, stronger and vibrating; bowels free; no appetite.

Hirudines xx. reg. cordis.

Omittr. Tinct. Digit.

Liq. Hydr. Oxymer. 3ij. om. horâ.

Liq. Opii. Sed. gtt. xxx. h. s.

10th.—Experienced some benefit from the application of the leeches, but in consequence of the pain still continuing, sixteen were again applied in the evening, which relieved him entirely; has coughed only three times since yesterday evening; the respiration is now tranquil, and 20 in a minute; can now lie down in bed, and continues on the left side; the respiratory murmur is still puerile on the right side, and indistinct on the left, and without any ronchus; the bellows-sound is now clearer; pulse 108 and soft; bowels free; tongue white.

11th.—Did not sleep well last night; cough more troublesome and dyspnœa greater than yesterday; tongue coated; bowels once relieved this morning; pulse 120, very hard and vibrating; face appears more bloated and livid; the medicine pro-

duces nausea, but not vomiting; he feels so weak as not to be able to sit up in bed.

Omittr. Liq. Hydrarg. Oxymer.

Istic. cruribus Ungt. Hydrarg.

12th.—Is free from pain to-day; feels faint and low; pulse 120, weak, but jerking; respiration still hurried; the lips are less livid; skin temperate and soft; tongue white, and more furred; anorexia; very little expectoration. Yesterday, when the breathing became much oppressed, and the lips very livid, twelve leeches were applied to the scrobiculus cordis, and he took

Tinct. Digit. 3j.

Tinct. Hyoscyam. 3ij.

Tinct. Camph. Comp. 3ij. ex aqua.

Tinct. Digit. 3ss. ex

Aqua Menth. ter die.

Low diet; beef tea, table beer.

13th.—Slept very comfortably last night, and continues much the same as yesterday; in the evening he had 3iss. of port wine, on account of the constant nausea.

14th.—The digitalis having produced its depressing effect in a great degree, with constant nausea and anorexia, pulse 88, and respiration 15, it was left off. In consequence of the soreness of the gums and throat, let the Ung. Hydr. be discontinued.

Acid Hydrocyan. ℥iij. ex

Aqua Cinnam. ter die.

16th.—Yesterday the hydrocyanic acid produced sickness, which was relieved by three doses of the effervescent mixture, with ten minims of the tinctura opii in each. The first dose of the acid produced sickness to-day. He slept better last night, and feels easier to-day. Pulse 108, regular, and much softer; lips less livid; gums still sore; respiration about 30; bowels free; tongue clean.

Acid. Hydrocyani. ℥iij.

Quinæ Sulph. gr. j. ex

Infus. Rosæ, ter die.

19th.—Has been improving during the last two days. Pulse 108 and full; appetite better; bowels free.

Elaterii gr. ss. alt. auroris.

Cont. cætera.

23d.—Feels rather stronger to-day than he did yesterday; decubitus still on the left side; there is considerable fulness in the epigastric region. Pulse 120, full. Each dose of the elaterium produces eight or ten motions.

Hirudines viij. scrob. cordis alt. auroris.

Omit. elaterium.

26th.—Eyelids becoming anasarcos. Breathing rather freer; cough less; appetite better; tongue furred; thirst; bowels

* Half an ounce of the mixture contains ½ gr. of Antim. Tartar.

open; urine high-colored and scanty; pulse 108, strong and throbbing.

V. S. ad 3xii.

Pil. Hydrarg. gr. v. ter die.

Omit. cætera.

27th —The blood extracted yesterday was both buffed and cupped. He slept rather better during the night, but is much the same as yesterday; less anasarca of the face; pulse 120 and softer; respiration is still puerile on the right side; urine increased in quantity. To-day, by means of the stethoscope, pectoriloquy has been discovered at the superior spinal fossa of the scapula.

Cont. Pil.

ST. THOMAS'S HOSPITAL.

Retention of Urine from Stricture—Local application of Belladonna.

JOHN SCHAAFF, æt. 61, a native of Saxony, residing in London, and where, for the last thirty years, he has been employed as a coppersmith and brazier, was admitted into Isaac's ward with retention of urine. His health has been generally pretty good; occasionally, however, he has been affected by colic. Has had stricture in the urethra for two years, and has been obliged at times to apply to a medical man, for the purpose of having his urine drawn off by a catheter.

The man came to the hospital about 3 o'clock on Sunday morning (Feb. 24), when the dresser found it impossible to introduce a catheter into the bladder, some blood following every attempt. After some time, however, he succeeded in passing a small-sized conical bougie, and some urine flowed, which greatly relieved the patient. The man refused to have any thing more done for him at that time, and he returned home to his bed.

At ten A.M. of the same day he returned, laboring under the like distress as at his first application; after some trouble a bougie was passed into the bladder, and a few ounces of urine followed on its being withdrawn. The stricture is situated about three inches from the orifice of the urethra. The man was now put into the warm bath, and a dose of castor oil given him. Mr. Tyrrell ordered him to take Tinct. Ferri Muriat. ℥xv.; Tinct. Opii ℥v. 2dis horis. A bougie, rubbed over with belladonna and oil, to be passed into the urethra. Soon after the man came from the bath this was tried, and after two or three attempts the bougie (which was larger than those used before) readily passed the stricture, and the bladder was emptied of its contents. Poppy fomentation to be applied to the lower part of the abdomen and penis. About an

hour after another bougie was passed, and kept in the urethra two hours.

On the following day a bougie (conical-pointed) was introduced two or three times, by which the stricture was sufficiently dilated to allow the urine to pass pretty freely.

The man was allowed to remain without any farther regard to the stricture for a few days, for the purpose of allaying a considerable tumefaction of the penis; and on this subsiding, a bougie simply oiled could not be introduced beyond the stricture, and belladonna was again resorted to, by which the irritability of the stricture seemed to be allayed, and the bougie passed into the bladder.

The patient now passes his urine whenever he feels a desire, and the present treatment adopted is merely attending to the secretions of the alimentary canal, and the introduction of a bougie daily.

GUY'S HOSPITAL.

Gangrene of the Scrotum from Purpura (?)

On Saturday, the 14th inst. a little boy, about two years old, was admitted into this hospital, with gangrene of the scrotum and incipient gangrene of the inner parts of the thighs contiguous to the enlarged scrotum. The account given by the mother was, that the child had been in a state of ailment for five or six weeks, and that, about a week since, the scrotum had suddenly swelled and become dark-colored, which induced her to apply to a neighbouring practitioner for advice. He examined the bladder with sounds, and, after a few days' attendance, requested that the child might be brought to the hospital. The child, who appeared to be in a most exhausted condition, was admitted under the care of Mr. Key. Wine and other stimulants having been administered, the bladder and urethra were carefully examined; and in the former an irregular projection was discovered at its fundus, which led some to consider that the child labored under stone. The urethra appeared to be healthy. The scrotum had not the usual distended appearance arising from extravasation of urine, nor were the pubes or surrounding integuments of the perineum inflamed; and Mr. Key therefore considered the inflammation and gangrene to have arisen spontaneously, and that no surgical measures were likely to afford the child any relief. Stimulants were continued up to the evening of the following day, when the child died.

Examination post-mortem.—The bladder and urethra having been removed, were laid open. In the fundus of the former, an irregular projection, consisting of blood effused under the mucous coat, was discovered to

have produced the sensation which the sound communicated. At the cervix several spots of ecchymosis were seen, and the whole canal of the urethra was darker than usual, as if infiltrated with blood. Its lining membrane was entire. The iliac glands were enlarged, and of a venous tint; on being cut open, their reticular tissue was found loaded with fluid blood. On inspecting the external surface of the body more closely, several minute spots of ecchymosis were seen, resembling the ordinary form of purpura hæmorrhagica; and on one leg a small sore existed, with a dark suffused margin, as if produced by a similar spot passing into the ulcerative state.

Dr. Bright, who was present at the inspection, considered the case as an aggravated form of purpura in the scrotum and thighs; and the appearances on inspection seemed to confirm the correctness of the opinion.

LIGATURE OF THE CAROTID

In a Child three months old.

By a letter from a medical friend in New York, we are informed that Professor Mott has recently taken up the carotid artery in a child three months old, for the removal of a tremendous anastomosing aneurism, extending across the nose from canthus to canthus, covering the nose to its extremity, and also reaching upon the forehead. The child had recovered from this operation when the letter was written, and was in a few days to have had the carotid of the other side taken up. This has most probably been done, and we hope to give a detailed account of the case in our next number.—*Amer. Jour. of Medical Science.*

WAX MODELS.

To the Editor of the London Medical Gazette.

SIR,

In your valuable periodical, the *Medical Gazette*, Feb. 20th, 1830, I find, under the article "Anatomical Wax Models," that we have "not the real art among us." Now, sir, for the information of your readers, and the writer of the above, I beg leave to say that we have the real art among us. After this assertion, if any doubt exists, it may be set at rest by a visit to the museum of Guy's hospital: in it are many wax models, of unrivalled beauty and correctness, the production of a Mr. Towne, an Englishman, of whom Dr. Hodgkin (Professor of Morbid Anatomy to the above named establishment)

says in the preface to the Catalogue of the preparations "he created his own art."

I request you will give this letter an early insertion, and you will much oblige, Mr. Editor, your constant reader,

MEDICUS.

1st March, 1830.

PRINT OF JOHN HUNTER.

We understand that a print of John Hunter, in a gilt frame, having a letter from the donor pasted at the back, was stolen from the room of the Hunterian Society on Wednesday the 17th ult.; and that a reward of ten pounds is offered for its recovery. Any communications respecting it are directed to be addressed to Mr. Cooke, 39, Trinity Square.

FORGERIES IN THE LANCET.

"A FRIEND" is much mistaken in supposing that we approve of the forgeries which have at different times appeared in the *Lancet*. Our remarks (see our last number, p. 704) bear no such interpretation; but we meant, and we repeat, that the avidity with which the pages of that journal are opened to the reception of scandal and trash of every kind, renders its readers liable to be imposed upon by any one whose inventive faculties are stronger than his principles.

LITERARY ANNOUNCEMENTS.

Shortly will be published, by Burgess and Hill, in one splendid volume royal octavo, illustrated by upwards of 260 beautifully executed drawings, *A Vade Mecum of Morbid Anatomy, Medical and Chirurgical, with Pathological Observations and Symptoms.*

Dr. G. Calvert Holland has in the press a work on the *Physiology of the Fœtus, the Liver, and the Spleen.*

BOOKS RECEIVED FOR REVIEW.

Lectures on the Theory and Practice of Surgery. By John Abernethy, F.R.S. &c.

Synopsis of Midwifery; shewing the Management of Natural and Difficult Labors, their Consequences and Treatment. By Henry Hurry Goodeve and Thomas Evans. Second Edit. This edition is bound in the form of a pocket book.

Proceedings at the Eleventh Anniversary Meeting of the Hunterian Society.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MARCH 13, 1830.

LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

By WILLIAM LAWRENCE, F.R.S.

LECTURE XXIV.

*Treatment of Syphilis continued.—Mercury ;
its preparations and modes of administration
—its good and bad effects.*

MERCURY, gentlemen, is employed in the treatment of syphilis, either simply as a local application or as a remedy capable of producing a powerful influence on the system at large ; and through that influence, of arresting the progress of the disease, and ultimately curing it. Mercury in the metallic form is inert ; it produces no effect upon the human body ; it may be swallowed in any quantity, and will do neither good nor harm. It exercises no influence except when it is combined with oxygen, or with an acid.

Of the forms in which mercury is used as a local application, perhaps the most common is what we ordinarily call the *black wash*—I believe rather an unchemical combination of calomel with lime-water ; the proportion being 15 grains of calomel to an ounce of lime-water. This is used as a lotion, by dipping lint into it and applying it to the venereal sores. It is one of the best, if not the very best mode of applying mercury locally. There is another lotion, called the *yellow wash* ; and which is a combination of oxy muriate of mercury—corrosive sublimate, with lime-water, in the proportion of one grain and a half or two grains to an ounce. This is used in the same way as the preceding. We have likewise the mercurial ointment, which, however, is not frequently applied to venereal sores. There is also the red precipitate ointment (*unguentum hydrargyri nitrico-oxidi*), which is more commonly used in that way ;—and the citrine ointment (*unguentum hydrargyri nitratis*), which is not very frequently

used in venereal sores. Another mode in which mercury is employed locally, is by means of fumigation ; and for this purpose the red sulphuret of mercury, or cinnabar (*hydrarg. sulph. rub.*), is commonly used. The mode of employing mercury in this way, is to heat a piece of iron red hot, and to throw a certain portion of the cinnabar upon the iron—we generally use half a drachm, or a drachm, and place over it a funnel terminating in a pipe, by which the fumes raised in consequence of the cinnabar being exposed to the heat of the iron, are directed to the ulcerated surface. The cinnabar is volatilized by the heat, and rises in the form of white fumes, which gradually form a pellicle on the surface exposed to them.

When we endeavour to produce the peculiar effect of mercury upon the constitution, we can accomplish this purpose either by applying certain forms of mercury to the surface of the body or by administering it internally. The most common way of using it externally is by friction—that is, rubbing on the inside of the thighs, before the fire, for the space of twenty or thirty minutes every night, a drachm of the mercurial ointment ; sometimes half a drachm only is employed, sometimes a drachm, twice a-day. When the rubbing is discontinued, the chief part of the ointment will be found to have disappeared—it may be said to be rubbed in. The patient should not wipe off what is adherent to the skin, but put on a pair of flannel drawers, and wear them during the process. If pimples should break out by rubbing the ointment on the inside of the thighs, the patient must vary the part on which he rubs ; and inasmuch as a certain proportion of the ointment adheres to the skin, it is necessary to wash the surface clean every third night, before beginning to rub in more. Now when mercurial ointment is employed in this way to the outer surface of the body, it is capable of producing the same general effects on the system as when other forms are taken inter-

nally. By the aid of friction, the ointment is made to enter the absorbent vessels, and thus it is introduced into the system. The merely putting ointment in contact with the skin is not sufficient; if we only spread the ointment on the surface, the effect is not produced; the mechanical action of rubbing is necessary to accomplish the purpose.

A principal advantage attending this mode of employing mercury is, that it does not produce those unfavorable effects on the alimentary canal, and other parts of the system, which the internal use of mercury frequently does—or it produces them in a much less degree. Hence the employment of mercury by friction used to be the general mode in which the remedy was administered for the purpose of affecting the system. The troublesome nature of the process has perhaps led, in some measure, to its discontinuance, as it is not now so common a mode of employing mercury as the internal administration.

Mercury may be introduced into the system by general fumigation of the surface of the body. If the naked body be placed in a box, at the top of which there is an opening made for the head to pass out; and if some of the preparations of mercury be volatilized by means of a hot iron placed in the box, then the whole surface being exposed to such fumigation, in this way a very speedy affection of the system may be produced. For this purpose, the hydrar. oxyd. cinereum, or the hydrar. sulphuret. rubrum, may be employed. The cinnabar, however, is rather too active to be employed in this extensive way. Indeed I may observe that the mere local use of mercury in the way of fumigation, sometimes produces an affection of the system. Cinnabar fumigation is not an uncommon mode of applying mercury locally to some ulcerations of the throat; and I have many times seen salivation produced when it has been employed in this manner.

Of the forms of mercury which are administered internally, perhaps the safest, and, upon the whole, the best and most convenient, is *pilula hydrargyri*, or blue pill as it is called. This is given generally in doses of four or five grains; but sometimes as large a quantity as ten grains at each dose is given two or three times in twenty-four hours. Another mode, and a very common one, of administering mercury internally is in the form of calomel—the *hydrargyri submurias*. One or two grains, and sometimes three or four grains of this are administered two, three, or four times in twenty-four hours. Now as calomel frequently acts as a purgative, it is often necessary, when it is administered with a view of influencing the system, to combine it with opium, to prevent its action on the bowels, and for this purpose one-third of a grain or more may be united to each dose of the calomel. Fre-

quently it is necessary to combine opium in the same manner with the blue pill; for though this does not commonly act as a purgative, it does sometimes affect the bowels. The *hydrarg. c. creta* is a preparation of mercury, produced by rubbing it with chalk; it is considerably less active than either of the two preceding, and therefore is more mild. It is employed where we wish to administer mercury to children, or in cases of individuals in whom other forms of mercury disturb the bowels or produce unpleasant effects. It is given in doses of from five to ten grains, and may be employed two or three times a day. This is a form of mercury which is not employed where we want to act powerfully or quickly on the system. The *oxymuriate of mercury*, or corrosive sublimate, is another form that is employed in certain cases, though it possesses poisonous qualities even in small doses. On account of the active properties of this form of the medicine, it must be used in minute doses, and its effects cautiously observed. We give sometimes the sixteenth of a grain, or the eighth, or the fourth of a grain, two or three times a day—seldom exceeding one grain in twenty-four hours. This remedy was introduced into practice in consequence of the encomium bestowed on it by Van Swieten, who practised at Vienna; hence it came to be used generally on the continent—much more so than in this country. When I was in Paris, ten years ago, I found that all the cases, whether of primary or secondary symptoms, at the Venereal Hospital there, were treated with corrosive sublimate. The formula thus employed contained one grain of oxymuriate in an ounce of distilled water, and the quantity they usually gave was half an ounce—that is, half a grain twice a day—rather a large allowance. The remedy was carried round with the physicians when they made their visits, and the requisite portion was poured out and drank by each patient in the presence of the medical attendant; so that at all events the administration of the remedy was ascertained. But generally they direct the proper dose of sublimate to be taken in milk or thin mucilage. The *liq. hydr. oxymuriat.* of the *London Pharmacopæia*, contains half a grain of sublimate in an ounce, so that one drachm contains the sixteenth part of a grain. A grain of corrosive sublimate may be dissolved in an ounce of tincture of bark or rhubarb; then a teaspoonful, which contains the eighth of a grain, may be taken three times a day. The red oxyde of mercury, which was formerly called *hydrargyrus calcinatus*, was at one time frequently given for the purpose of affecting the system; a grain, or a grain and a half, was administered twice a day, generally in combination

with opium. This is rather a powerful form, and very apt to affect the bowels; and as it has no particular advantages, it is now pretty generally discarded from practice—at least in this country.

Now mercury, like all other remedies, affects different individuals very differently, so that we cannot mention any definite dose that can be employed by all persons under all circumstances; indeed there is a considerable variety in different individuals, in this respect. There are some persons in whom the smallest quantity, as a grain or two of blue pill, will produce salivation;—there are others in whom you may rub in mercury, and give calomel or blue pill in large doses internally, and yet you cannot affect the system. Hence it is necessary to proceed cautiously in the administration of mercury, and to watch its effects. You cannot safely order a dose and let the patient go on taking it for several days without seeing him; you may find, perhaps, that salivation has come on in the meantime. You should inquire, in such cases, whether the person has taken mercury before; whether it affects him quickly and in small doses;—you should ascertain these points before you direct the form and quantity of the remedy. In such cases frequently, where we wish to affect the system rapidly, in order to put a stop to symptoms that are spreading in a destructive way, we employ the remedy both externally, in the shape of friction, and internally, as in the administration of blue pill or calomel, till we produce a certain effect, and then, perhaps, we adopt the internal or external administration alone, provided we can thus keep up the effect to the required extent.

When mercury is given in a moderate dose it generally purges, and a small quantity, repeated from time to time, is given on account of the mode in which it produces this effect, in order to alter the state of the secretions in the alimentary canal. But it is not the purgative effect of mercury, nor the influence, which it is thus capable of exerting on the secretions, that has the power of checking the progress of the venereal disease. Mercury must be given in large doses; it must be repeated; the effect of it must be continued often for a considerable length of time, in order to bring about that change in the system under which the venereal disease is arrested in its progress, and is made to commence the restorative process; in truth, the action of the remedy as a purgative interferes with its influence on the system—with that influence which is necessary to check the venereal disease. The remedy produces very considerable and powerful effects on the animal economy. It generally increases the quickness of the pulse, and sometimes produces a slight degree of what we may call feverish

excitement; it augments some of the secretions, particularly that of the salivary glands, frequently those of the kidney and of the skin. It not only augments the secretion of the skin, but sometimes the secretion becomes actually impregnated with the metal, so that articles of gold and silver that are worn near the person undergo superficial amalgamation, in consequence: a gold watch may thus be turned white.

Mercury produces a peculiar effect on the mouth. In the first place it causes an unpleasant metallic or coppery taste, which patients are most sensible of in the morning, communicating at the same time a foetor to the breath, so that persons who have taken mercury, and do not wish that the fact should be known, must be careful not to approach too near to those from whom they wish to conceal it. It then produces a swollen, spongy, inflamed, tender state of the gums, with looseness and a painful condition of the teeth, so that the person is not only unable to bite a hard substance, but even any thing that approaches to a state of solidity. The surface of the tongue, and the mucous membrane of the lips and cheeks, undergo the same kind of inflammatory affection as the gums. The parts swell and become very painful, and if the effect of the remedy goes on, it causes ulceration, the surface thus exposed assuming a sort of greyish or ash colour, as if it were covered with a superficial slough. In the further progress of the mercurial influence, sloughs to a considerable depth may take place. In conjunction with these effects in the mouth, there is an increased secretion of the salivary glands, and this constitutes salivation, or ptyalism, during which a person will spit a pint, or it may be two, three, or four pints in 24 hours. The fluid thus discharged is turbid and ropy, consisting apparently of a mixture of the secretion of the salivary glands with mucus derived from the mucous membrane. The effect which is thus produced upon the mouth is considered as a criterion of the general influence of the remedy upon the system; it is considered as a test of the influence on which we place our reliance in arresting and curing syphilis, and I believe it may very safely be regarded in that light. So long as no alteration is produced in the state of the mouth, we frequently shall not have the curative effect of the mercury taking place, and we generally find the curative influence proceed in an equal degree to that of the local effect upon the mouth. We cannot, however, say that this is absolutely true in all cases; other effects of the remedy may be produced, although this peculiar influence on the mouth may not have taken place to the extent that we expected; so that there are some instances in which syphilitic symptoms subside, although

mercury does not produce its usual effect upon the mouth.

Now at the same time that these effects of mercury are produced upon the system, we see a beneficial influence produced most obviously on the syphilitic symptoms. Venereal ulceration is put a stop to, the restorative process commences, and the ulceration heals; lymph which has been effused from the iris into the anterior chamber is absorbed; swellings of the periosteum are dispersed; matter is frequently removed from buboes; pains of the bones and joints subside, and eruptions of the skin fade and go away. Such are the kind of changes that we observe in the syphilitic symptoms when mercury is introduced into the system and acts favorably on the disease.

Now we really find it difficult to reduce these several manifestations of the mercurial influence on the symptoms of syphilis to any one general principle. Indeed when we survey them collectively, some of them seem contradictory. We observe that mercury has a powerful influence in producing absorption—that is, it may cause absorption of lymph from inflammation of the iris, and of the interstitial deposition that constitutes nodes in the periosteum;—it will also produce absorption of the matter of a suppurating bubo; now in all these cases we see it acting in increasing the action of the absorbent vessels. But, on the other hand, we observe that it arrests the action of these vessels in ulceration;—it puts a stop to the process of absorption which continues and increases the ulceration, and it occasions the deposition of the new matter which is necessary to repair the breaches produced by such ulceration.

It has been said that mercury cures syphilis by its specific power—that is, that mercury is a specific for syphilis, which would imply that the administration of mercury would always and invariably put a stop to this disease. If the inquiry be made, what is the specific power of mercury? the answer would be, it is to cure syphilis: so that we only reason in a circle. Mr. Hunter says the mercury produces irritation in the system, which irritation supersedes or destroys the irritation caused by the venereal disease. Now for my part I cannot discover more in this than the simple statement of the fact that mercury cures the pox. I believe we cannot yet go much farther than this, in our attempts at explanation.

In order to produce the beneficial influence which we wish to effect in syphilis, it is necessary to give the remedy repeatedly, and to persevere in the employment of it for a considerable length of time. It is not one or two doses that will produce any effect; we must give the remedy, perhaps, several times in twenty-four hours; and day after day, week after week—nay sometimes

even months are consumed in its employment, before the requisite effect is produced. We cannot say that the remedy is to be given exactly in the same doses, or the same repetition of doses, during the whole of this time. We must watch the effect it produces; we must sometimes increase the dose, sometimes diminish it—leave off the remedy, and commence it again—according to circumstances, the object being to produce a certain effect upon the system, which we must keep up for a certain length of time. When a person employs mercury in this way, for the cure of the venereal disease, or indeed for any other disease, he is said to go through a course of mercury: it is called a *mercurial course*. Now there are certain rules of diet and management to be observed, in order to ensure a favorable action of the remedy on the system.

In the first place, we find the effect of mercury on the system is increased by warmth, and keeping the patient in a regulated temperature. Hence heretofore it was a constant rule that the patient should continue in his own room, and not expose himself to the external air while going through a course of mercury. There is so far reason for this, that free exposure to the air lessens the action of the mercury. If we wish to effect the object as soon as we can, and to carry it as far as we can, we should keep the patient in a warm and tolerably uniform atmosphere. We do not now confine a patient strictly to his chamber during a mercurial course—it is not necessary; but, as a matter of precaution, he should avoid cold and damp; we ought not to allow him to go out at night, but keep him warm and well clothed; and under certain circumstances he should be confined to his room, but it should not be considered as a general rule. The diet of the patient should consist of milk, bread, and farinaceous articles. When the mouth begins to be affected the patient is unable to take food of a solid kind; therefore the articles I have mentioned are almost from necessity the diet of a patient at that time. There is, moreover, in consequence of the action of the mercury, a feverish state of the system produced, under which animal food and fermented liquors would be absolutely improper. On account of the disposition which mercury has, whether employed internally or externally, to affect the bowels, it is necessary to avoid certain articles of diet that will favor that disposition;—thus, in the progress of a mercurial course, a patient should not take acids—he should not eat salads, pickles, vinegar, unripe fruits, nor undressed vegetables. There are some instances in which mercury is administered to patients who are already in a considerably reduced state of health, and in whom it is expedient to sustain the general strength of the system at the same time that we avail ourselves of the

power of mercury in checking the specific disease. Under such circumstances it is necessary to allow the patient a nutritious and rather generous diet, at the time that we are using mercury. We therefore give soups, strong broths, a small quantity of fermented liquor, as porter or ale—or even wine and water may occasionally be allowed under such circumstances.

The effect of mercury often proceeds further than we wish, and indeed in many instances the remedy acts prejudicially on the system: it produces effects which are in themselves almost a kind of disease, sometimes, we may say, a serious disease, and which requires appropriate treatment. Sometimes the remedy acts very seriously on the mouth, producing excessive salivation; and I do not know a more painful condition than that of an individual in whom the mercury does produce this excessive ptyalism. The tongue becomes swelled, excessively sore, excoriated on the surface and edges, and presses against the teeth on each side, so that indentations of these are observed on the margin of that organ. Sometimes the tongue is so swollen that it actually protrudes out of the mouth, constituting a most painful state: the lips are enormously swelled, and the whole head and face sometimes participate in the tumefaction. The mucous membrane of the lips, cheeks, and throat, becomes inflamed, excoriated, ulcerated, sloughy, and excessively tender. There is at the same time an incessant and profuse discharge of foetid saliva from the mouth; this continues to run night and day, and, in fact, it almost prevents the patient from taking rest. The quantity of the discharge, under such circumstances, is beyond what I have already mentioned; frequently a pint or a quart of saliva flows from the mouth in a comparatively short time. Occasionally the effects are yet more serious; the gums slough, the alveolar processes perish; and the teeth themselves fall out. I recollect seeing a gentleman who came from the East Indies: he had been in service at Rangoon, in the Burman war, and contracted a fever, for which it was necessary to give him mercury freely. While taking this medicine his head swelled to an enormous size, and all the symptoms of dreadful salivation took place: and such was the deplorable state in which he embarked for England, with little expectation of reaching this country. He recovered a little on the voyage; and when he arrived I saw him, at which time the lips and gums were enormously swelled; he could not open his mouth at all, and there was a constant discharge of the most horribly foetid matter from the mouth that I ever witnessed; indeed it was so bad that he quite scented that part of the ship in which he was stationed, so that none could go near

it. When I examined his mouth, I found that the whole of his teeth were so loose, as to render it necessary for them all to come out—sixteen from each jaw; then the entire alveoli of the jaws came away in large pieces, so that he lost the whole of the teeth and of the alveolar processes; and in addition to that, in consequence of the ulceration, the surface of the gums became united to the cheeks, so as to limit the power of moving the lower jaw.

Salivation is not a state that at all endangers life, though sometimes it almost prevents a person for a certain period of time from taking food: it is impossible in the swelled, excoriated, and tender state of the tongue and throat, for the patient to perform articulation or deglutition with comfort. Now, unfortunately, there is no direct or speedy remedy for this very painful and distressing state: it will require two, three, or four weeks for the affection gradually to subside, and we cannot, perhaps, very materially accelerate the disappearance of the symptoms. I have mentioned that a warm and uniform temperature promotes the action of mercury;—in the same way free exposure to cold tends to diminish it; so that when a person labors under the state of the mouth that I have just mentioned to you, he should go into the open air without handkerchiefs wrapped about the face. People are apt to tie up the mouth, in order to avoid the air; but, on the contrary, they ought to expose themselves to the open air. Saline purgatives should be administered in small doses, so as to keep the bowels open; for when mercury acts on the bowels, its action is less on the mouth. Locally the patient must employ a lotion of alum or tincture of myrrh, in the infusion of roses, in order to cleanse the mouth out, to remove those very offensive secretions which are constantly poured into it, and keep it in some degree comfortable. When the swelling has once subsided—when the patient can open the mouth so that we can observe the ash-coloured superficial sloughs of the mucous membrane, we shall find that the pain of these will be greatly diminished by touching them with the liniment. eruginis of the Pharmacopœia. This is an active remedy; it is of a poisonous nature, and therefore should be cautiously employed. You should roll lint round the point of a probe, dip it into the liniment, and thoroughly soak the parts with it. Let it continue a minute or two, and then let the patient take lukewarm water to wash out the mouth, so that it be not swallowed; for if a small portion of this liniment be conveyed to the stomach, it produces bad effects on that organ. I do not know any remedy so advantageous in producing the effect I have mentioned as the linimentum eruginis. A

strong solution of nitrate of silver may be used for the same purpose. In this way the effects produced by excessive salivation will gradually subside; but I do not know any mode of putting a stop to them quickly.

Mercury very frequently acts unfavorably on the bowels; it produces pain, griping, and purging, with tenesmus and mucous evacuations; that is, it produces generally a state of irritation of the alimentary canal. Sometimes, in order to put a stop to these effects, you must discontinue the remedy, and give the patient opium—tincture of opium in chalk mixture. A dose of rhubarb, with *pulv cretæ c. opio*, will open the bowels and relieve the irritation; and when you resume the use of mercury again, you must combine it with opium, in order to prevent it from producing those effects. Frequently by a combination of opium with mercury you prevent the recurrence of unpleasant symptoms in the bowels; although, if you give mercury alone, you have the same symptoms recur.

Sometimes mercury produces a peculiar inflammation of the skin, which Dr. Bateman calls, *eczema mercuriale*. *Eczema* is a Greek word, meaning to boil over. The skin becomes inflamed in patches; minute vesicles form on the inflamed surface, as thickly set together as they can stand. These at first are hardly visible, as their contents are transparent; but they soon become opaque and purulent; they break and discharge matter, which encrusts on the surface of the skin, rendering it raw and tender. Under these crusts exudes a considerable quantity of secretion, rendering the skin hard and uncomfortable. Fresh patches of the skin become inflamed, and go through the same process. Thus, frequently this peculiar inflammation of the skin—this *eczema*, or what some call *erythema mercuriale*, extends over the whole surface of the body. The affection is a painful one, for it is attended with considerable inflammation of the skin; and the dry crusts which are formed on the surface—the exudation of matter—and the stiff state of the linen produced by this discharge, which is usually of a fœtid odour, renders the patient subject to irritation over the whole surface of the body. Now this complaint goes through a certain course; it gradually subsides in the parts in which it first appeared, and then comes on in others; but it is the source of great pain and distress, and even high constitutional irritation, during the time it lasts. Its occurrence seems to be owing to some peculiarity of constitution in the individual, for it will take place without a large quantity of mercury being employed: it will take place either in consequence of the external use of mercury by friction, or of its internal administration. Sometimes it commences where the friction is used—on the thighs,

and thence extends over the body; but it will be produced in individuals subject to it by the internal employment of mercury, and that even in moderate doses; and where a person is subject to this affection, it should preclude the use of mercury, except circumstances of the most imperious necessity require it. No person would think of using mercury in an individual who had been the subject of *erythema mercuriale*, except under the most urgent circumstances. The affection admits of little more than palliative treatment: soothing and mild local applications should be employed. The surface may be washed and gently cleansed by means of emollient or mucilaginous fluids, milk and water, decoction of linseed, and thin gruel. Parts which are particularly sore and inflamed may be covered with a bread and water poultice. Mild unctuous applications may be employed after the inflammatory stage is gone by, in order to detach and remove the crusts that are formed on the surface of the body. Aperient medicines, of course, must be given;—saline draughts with antimony may be used, and the complaint under such treatment will gradually decline.

Mercury frequently seems to act as a kind of poison upon the system; it will produce a quickness and small state of the pulse; it will cause the loss of flesh, loss of appetite, and continued restlessness at night; in fact, a state a good deal like what we call hectic fever. Sometimes it goes further, and has a peculiar influence in disturbing the action of the heart and the respiratory organs. It causes a sense of oppression about the præcordium, frequently an irregular action of the heart, a small, quick, intermittent pulse, coldness of the surface, and a pale contracted state of the countenance. These symptoms have been clearly described by the late Mr. Pearson, who devoted a chapter to the subject in a small work, which is entitled, “Observations on some Articles of the Materia Medica in the Treatment of Syphilis;” and he calls this affection *erethismus*. *Erethismus*, which is a Greek word, is about equivalent to irritation. He says that at the Lock Hospital, of which he was surgeon, he had observed that occasionally persons died suddenly without having been previously ill, or without his being able to ascribe the death to any particular cause. He was hence led to pay particular attention to persons who were under a mercurial course; and he found that symptoms such as I have described were occasionally produced; and that, in this depressed condition of the circulation and of the general powers, a slight degree of exertion, such as walking across the ward, would suddenly prove fatal. I once saw a marked instance of this affection that occurred in the person of a physician, who is well known by his writings—the late Dr.

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Mr. Pearson observes, that the best remedies for this peculiar affection are, first, free exposure to the air; secondly, medicines of a cordial or stimulating kind, a good and generous diet, animal food, wine, and other fermented liquors. These means seem obviously calculated to raise the drooping powers of the circulating system and the rest of the economy. In point of fact, he says that such means are found the best calculated to remove the symptoms I have mentioned. I recollect in the case of Dr. Bateman, although he was a person little given to fermented liquors, he found it necessary to take wine,—even brandy, pretty freely, during the period that he was suffering in this way; and also to take jellies and animal food in a concentrated state. When such symptoms are coming on, the volatile alkali, with camphor mixture, are the best means; and of course I need hardly mention, that the employment of mercury is to be discontinued; and if the patient be in an hospital, he must be immediately removed from the mercurial atmosphere. In the state of the system produced by the action of mercury, some persons appear to be particularly disposed to rheumatic affections. Under a mercurial course we frequently find patients complaining of pains in the joints and limbs; and besides that, we occasionally see actual swelling of the joints coming on, which we have every reason to ascribe to the effect of mercury. It would thus appear that in some individuals, having a rheumatic disposition, the employment of mercury is likely to bring it into action. Hence the necessity of individuals of such constitution observing all the caution that is possible to prevent the prejudicial action of the remedy.

To this catalogue of evils that are produced by the employment of mercury some persons are inclined to add very considerably; and, in fact, among the prejudicial effects of the remedy are enumerated, by those who are unfavorable to its employment, eruptions, iritis, affections of the nose, of the bones, and of the joints, being a considerable part of those symptoms which we know as the secondary symptoms of syphilis. It has been contended by those who, in modern times, have been great advocates for the treatment of syphilis without mercury, that

a great part of those symptoms usually described as secondary, are in fact the result of the remedy that has been employed to counteract syphilis. Now I must observe, in the first place, that we know all the symptoms that I have just mentioned may be produced by syphilis treated without the aid of mercury: we know that each of these symptoms is seen in individuals that have taken no mercury at all; we have therefore clear evidence that all these effects may be produced by the disease. We have not the same evidence that they can be produced by mercury; on the contrary, mercury is given in many diseases besides syphilis, and to a considerable extent; but in no instance when given for such diseases do we find it produce eruptions like syphilitic eruption, or that it causes iritis, diseases of the bones, of the nose, or the periosteum: the effects then in question can be produced by the pox without mercury; but we have not the same clear evidence that it can be produced by mercury without the pox. Now it is true, that mercury and the pox taken together may produce that which neither will produce singly. I readily admit that the injudicious use of mercury, and the repeated employment of it in cases in which it ought not to be employed, may act prejudicially on the system, and that a perseverance in the use of it, where it exerts some of its noxious influences, may aggravate the symptoms of syphilis—may tend to make them return more easily—and may make them more difficult to cure. Thus, I think, there can be no difficulty in admitting—that the employment of mercury, under such circumstances, may increase the difficulties which belong to the disease itself. I cannot, however, myself at present see any evidence that mercury is capable of producing these symptoms, which we are in the habit of witnessing as the effects of syphilitic poison, where no mercury has been used; and certainly there are injurious effects enough arising from mercury without adding those that do not belong to it. In fact, all we want is a knowledge of the truth—to know what the remedy is capable of effecting, and what it is not—to understand what advantages and what disadvantages it may produce on the system, and not to carry our notions of it beyond what is legitimate; for the remedy, undoubtedly, is a valuable one, and we might be led by incorrect notions to reject its influence in cases where it would be really of service.

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A consideration of the prejudicial effects of the remedy, of course, would naturally lead us to restrict its employment to cases in which we deem it *absolutely necessary*; and also to endeavour to secure the effects which we wish to accomplish by the use of as small a quantity of the remedy as is consistent with the object.

This naturally leads to the consideration

of two questions: first, whether a slight degree of the influence of mercury on the mouth may be considered as a criterion that it has produced all the effect that is necessary towards removing the venereal disease? Or whether a more considerable influence of the remedy may not be considered necessary generally, or in particular cases? It has been much the habit in modern times to be contented with producing just a sensible impression on the mouth, and then discontinuing the mercury, under the notion that when the mouth is affected at all, the system has experienced a sufficient influence for the removal of the venereal disease. I cannot coincide with this opinion. In a great number of instances, a slight effect of mercury on the mouth is sufficient; but there are instances in which this slight effect does not remove the symptoms, and in which, if the remedy is carried farther, so as to produce a more considerable influence, the symptoms yield. In fact, I think we never see the symptoms of syphilis yield so favorably as in certain instances, where the remedy, perhaps without our wishing it, has gone to the extent of producing profuse salivation. Under such circumstances we see a rapid improvement of the symptoms, which we do not see when the mouth is only affected in a slight degree. Another question immediately connected with the same point is, how long the remedy should be continued? Is it sufficient to destroy the venereal character of a sore, and to produce the healthy process of reparation? May you discontinue it then, and allow the sore to cicatrize? May you leave off the mercury when cicatrization is accomplished? Will you derive any benefit in respect of securing the patient from the occurrence of secondary symptoms by continuing it yet longer? These are important questions, and hitherto, perhaps, we have no means of answering them decidedly. With respect to the first, however, I should say it is not sufficient to affect the character of the sore, and then leaving off mercury, to trust to its healing. It is desirable to continue the use of the mercury till the sore is cicatrized. Then, secondly, whether any good is produced by persevering in the employment of mercury after the sore is cicatrized, with a view of preserving the constitution? This is an important point; but if you refer to the best writers, they say little calculated to assist you. Mr. Hunter's statements on this point are very contradictory. In one part he says you may discontinue it as soon as the local sores heal—in another he thinks that mercury will "protect the constitution," to use his own words; in short, you can get no clear evidence from him. General experience has led to the belief that a perseverance in mercury for some little time—a week, ten days, or a fortnight after the cicatrization,

has a beneficial effect in securing the constitution;—so that at present I am in the habit, when I have given mercury, not to leave it off suddenly, but to continue it after the local symptoms have subsided, under the impression that such continuance of the remedy tends to diminish the chance of further mischief.

PHYSIOLOGY AS CONNECTED WITH ATMOSPHERICAL INFLUENCE.

By HARDWICKE SHUTE, M.D.

(Continued from page 686.)

HAVING traced the oxygen expended in the process of respiration to an animal principle characterized by certain properties, we ought next, perhaps, in the regular pursuit of our object, to point out the connexion which subsists between this principle and the contraction of muscular fibre. It must, however, be obvious, that the propositions already advanced require for their support a rational and consistent explanation of all the phenomena which occur as connected with the respiratory function. Atmospheric air, as we have already shewn, returns from the lungs, not only deprived of a certain portion of its oxygen, but containing a nearly corresponding quantity of carbonic acid gas. How is the carbonic acid generated? What is the rational explanation of the correspondence mentioned?

Before we attempt to answer these questions, it is necessary to direct the attention of the reader to the nature of the blood when subjected to the influence of atmospheric air in the lungs. The blood, it is well known, has a communication with the digestive organs, for the purpose of receiving, through the medium of the lacteal portion of the absorbent system, that part of our food which has been selected and prepared for the nutrition of the body. It is equally well known, but not perhaps equally attended to, that the blood communicates with every part of the animal body, for the double purpose of distributing that which it has received from the digestive organs, and of receiving, through the medium of the lymphatic portion of the absorbent sys-

tem, the animal matter which has become effete—that is to say, worn out, and no longer capable of being adapted to the support of living action or structure. The blood communicates also, through the medium of the respiratory system, with the external air, for the purpose of receiving a certain portion of its oxygen, and for another purpose, which it is the immediate object of the following observations to elucidate.

The blood, therefore, is a compound of fresh matter, derived from the digestive and respiratory organs, and of effete matter received from every part of the body. For what purpose is the effete matter received? “The structure of the solid parts of the body consists of three distinct substances—a filamentous, a parenchymatous, and a cellular or web-like, as it was denominated by Haller; the *tissu muqueux* of Borden, and *tela cellulosa* of Blumenbach. All these parts are perpetually wearing out by their own action; the most firm and solid as well as the most spongy and attenuate. They are supplied with new materials from the general current of the blood, and have their waste and recrement carried off by a corresponding process. It is the province of the absorbent system to collect the effete matter from every quarter, and to pour it, by means of innumerable channels that are perpetually uniting, into the thoracic duct, which forwards it progressively to the heart. The really waste and intractable matter is at once thrown out of the general system by the mouths of the secernents.” “The blood, therefore, when exposed to the influence of the atmosphere in the lungs, consists of new materials destined for the nutrition of the body, or at least capable of being converted to that purpose, and of effete materials which have already accomplished their destined functions in the system, and been reconveyed to the blood for the express purpose of being thrown out of the body by the secernent vessels. Is there any reason, I ask, why the important function here attributed to the secernent vessels should not commence in the lungs, the first organs where, in the course of their circulation, the effete materials have an opportunity of communicating with the external atmosphere? Is it rational to suppose that nature would omit the first opportunity of relieving the body from a load of

matter which is not only useless, but which, if retained, becomes offensive to the system? Is there not reason to suppose that this secernent (we would rather say excrement) function does actually take place in the lungs, when we find the expired air containing a considerable quantity of carbonic acid gas? With respect to one of the elementary substances of this acid—namely, carbon—physiologists are under the necessity of admitting that it is supplied by the system; and almost all concur in the opinion that it is derived from the blood. Is it rational to suppose that the carbon, supplied by the blood and thrown out of the body by expiration, is the identical carbon recently prepared by the digestive organs for the purpose, or at least with the capability of being converted to the purpose, of nourishing the body, if it can be shewn that the blood at the same time contains a carbon derived from effete animal matter, and reconveyed to it for the express purpose of being thrown out of the body? If the carbon be derived from the effete materials of the body, why may not the oxygen? Are there any facts which discountenance the opinion that the carbon and oxygen of the carbonic acid expired are both derived from the *debris* of the animal system? Are there any facts connected with the respiratory process which do not admit of any other rational explanation?

We have seen that animal matter is constantly wearing out by its own action, and that it is the province of the lymphatic portion of the absorbent system to reconvey this effete matter to the blood, for the express purpose of its being thrown out of the body. By effete we must understand dead matter; since, “from the investigations which have taken place respecting the functions of absorbing vessels, it would appear that matter deprived of its vitality is the proper object of their operation.” Now what are the elementary substances which compose dead animal matter? Here we may look to chemistry for information, because we have to deal with dead matter only; and by that science we learn, that “to the three great components of vegetable matter—oxygen, hydrogen, and carbon—a fourth is in animal substances added, and constitutes a large portion of their structure. To the nitrogen which they contain are owing some of the most important qua-

lities that distinguish this class of compounds." It is obvious, therefore, that the blood, inasmuch as it consists of the effete animal matter reconveyed to it, for the purpose of being excreted, must be considered as containing carbon, oxygen, hydrogen, and nitrogen; and consequently the elementary principles of carbonic acid gas. It appears, then, that the blood, when exposed to the influence of atmospherical air in the lungs, has the capability of supplying both the carbon and oxygen of the carbonic acid expired. Is it rational, I again ask, to suppose that the carbon expired is that identical carbon which has been recently prepared by the digestive organs, for the purpose, or at least with the capability of being converted to the purpose, of nourishing the body, when the blood actually contains another carbon reconveyed to it for the express purpose of "being thrown out of the body by the mouths of the secretory vessels?" It is, indeed, evident that the opinion of physiologists is not, generally speaking, adverse to our view of the subject, as far as it regards the carbon of the carbonic acid excreted; since the blood is very commonly said to be purified—that is to say, cleansed of a noxious ingredient—by the process of respiration. "May not the deepened color of the blood be produced," says Dr Good, "by the carbon with which it becomes gradually loaded in the course of its circulation; and which, by the consent of all parties, is separated from it in the process of respiration?" The first attempt to explain the mode in which the blood acquires its inflammable matter, was made by Crawford. He observes, that the particles of which the body is composed have a tendency to change; the old ones are perpetually removed, while fresh matter is continually deposited in their room. This gradual interchange of particles is effected by the capillary vessels; the arterial blood conveys nutritious matter to all parts of the body, and employs it in repairing the waste that is necessarily going on; while, at the same time that the blood loses its nutritive particles, it receives the effete or putrescent matter, which is now become useless or even noxious to the system; this is carried by the veins to the lungs, and is there discharged after being united to the oxygen. "Crawford's hypothesis," says Dr. Bostock, "pos-

ses much ingenuity; it accords with some well-established facts, and seems to afford a natural and simple explanation of them; yet, upon a closer inspection, it will be found to be inadmissible. We have no evidence of the existence of any set of vessels, or other apparatus, by which the carbon can enter the veins at their capillary extremities, while there is an obvious source of this matter in the chyle which is poured into them, near their termination in the right side of the heart, immediately previous to the passage of the blood through the lungs." Now this objection is wholly inapplicable to the opinion that the carbon is derived through the medium of the absorbent system, from the effete portions of animal matter, since the source of the carbon is equally obvious in the animal matter which has been elaborated from the food, and in the food which is destined to become animal matter; and if the lacteal absorbents can take up carbon as a component part of chyle, there seems to be no reason why the lymphatic absorbents should not take up carbon as a component part of dead animal matter. But we are, in fact, unconcerned with the mode in which the effete carbon is reconveyed to the blood, inasmuch as the presence of effete animal matter implying the presence of effete carbon is all that we require in support of our argument. If the carbon be derived from this source, why may not the oxygen; since the presence of oxygen is equally implied by the presence of dead animal matter? If the blood contains oxygen reconveyed to it for the express purpose of being thrown out of the body, it is, we repeat, most irrational to suppose that the oxygen which has been recently taken into the system is excreted in preference.

But we have evidence, and in our opinion satisfactory evidence, that the oxygen of the carbonic acid excreted is not the identical oxygen which was taken into the blood in the previous inspiration. The experiments of Messrs. Allen and Pepys were considered as establishing the fact, that the quantity of oxygen contained in the carbonic acid expired, precisely corresponds with the whole quantity of oxygen expended in the process of respiration. Relying upon the accuracy of these experiments, and of the inference deduced from them, Mr. Ellis advanced the opinion, and

ably supported that opinion by a series of experiments, that no portion of the oxygen expended in respiration is absorbed by the blood; the whole of the oxygen lost being, according to this author, united with the carbon excreted into the air-cells of the lungs. Now it is obviously essential to this proposition that the oxygen contained in the carbonic acid expired be derived from an external source—that is to say, not supplied by the body itself. But the experiments of Dr. Edwards are regarded as proving the absorption of oxygen; and the following experiments are, we conceive, equally conclusive, as to the fact of the oxygen of the carbonic acid expired being occasionally supplied by the vegetable and animal bodies themselves. “Mr. Cruikshank introduced some soaked barley-seeds into a jar containing nitrogen gas, inverted over mercury. At the end of twelve or fourteen days there was not the least appearance of germination, but the gas had increased in bulk about one-fifth, containing from one-third to one-fourth of its bulk of carbonic acid gas.” Here, then, is positive evidence of carbonic acid having been evolved by vegetable bodies, when there was no external supply of carbon or oxygen, and when, consequently, these principles must have been supplied by the bodies themselves. The same fact is established by the experiments which shew that “when carbonic acid was produced by steeped seeds, confined either in nitrogen or hydrogen gas, the bulk of air was increased one-fifth, but nothing like germination then took place. He found that seeds, after being soaked in water, and passed up into a tube of mercury, formed carbonic acid in large quantity, but without undergoing any sensible change.” The same fact is also confirmed by experiments on different kinds of animals. Dr. Edwards’ experiments, in proof of the exhalation of carbonic acid by the lungs, are no less ingenious and decisive than those related above.

Spallanzani had stated that when certain animals of the lower orders are confined in gases that contain no oxygen, still the production of carbonic acid gas is not interrupted. Proceeding upon this statement, Dr. Edwards confined frogs in pure hydrogen, in which, by observing the necessary precautions, they are capable of existing for a considerable length of time, while we observe

that the action of the lungs is not suspended. The result of this experiment was, that carbonic acid was produced, and in such quantity as to shew that it could not have been derived from the residual gas in the lungs, being in some cases nearly equal to the whole bulk of the animal. The same results, although in a less degree, were obtained with fishes, and afterwards with snails, the animals on whom Spallanzani’s original observations had been made. He also extended his experiments to the mammalia, by taking advantage of a property which he had found to exist in certain species of newly-born animals, of being able to exist, for a short time, without the access of oxygen to their lungs. Kittens, of two or three days old, were immersed in hydrogen; they remained in this situation for nearly twenty minutes, without being deprived of life; when it was found that they had expired a quantity of carbonic acid greater than could have possibly been contained in their lungs at the commencement of the experiment.” There can, therefore, be no doubt that carbonic acid is occasionally generated, both by vegetables and animals, when there is no external supply either of oxygen or carbon, and where, consequently, both these principles must be supplied by the bodies themselves. If the elementary principles of the carbonic acid be occasionally derived from this source, why not always?

They are not, says Mr. Ellis, analogous cases; and, “we conclude with De Saussure, that ‘in germination the seed does not form carbonic acid, but furnishes only one of the constituent parts of it, namely, the carbon; and, farther, that when it does form this acid, independent of oxygen, (that is to say independent of an external supply of oxygen), it is only under a state of decomposition, or in circumstances where no living action is going on.’” Now if, under such circumstances, the seed be in a state of decomposition, it might reasonably be expected that the vegetative power of the seed would be, if not destroyed, at least impaired; but this is very far from being the case, since we are expressly told that “although seeds, after being steeped in water, yield carbonic acid when confined in nitrogen, yet they are in no respect affected by it. And again: “but this gas, (nitrogen), although it does

not aid vegetation, appears in no degree to injure the faculty of growth in plants any more than in seeds." It follows, therefore, that the decomposition by which the carbonic acid is, under the circumstances mentioned, admitted to be generated, is a decomposition going on in a living body. Does it not occur to the reader, and have we not already shewn, that the process of decomposition is always going on in the animal body? But it is, says Mr. Ellis, a decomposition "under circumstances where no living action is going on." Now in the opinion of most physiologists, the evidence of life (and the faculty of growth was in no degree impaired) is evidence of living action. And we are fortunately relieved from all difficulty on this subject by the experiments of Dr. Edwards, in which there was ocular proof that the action of the lungs was not suspended. If the principles of the carbonic acid excreted be occasionally derived from the decomposition which is perpetually going on in an animal body, why not always? It may be derived, says the physiologist, from the oxygen lately taken into the blood, and not immediately expended. Now the quantity of carbonic acid excreted in the experiments mentioned "being in some cases nearly equal to the bulk of the animal," is, we conceive, not very compatible with this idea; and the idea is farther inadmissible because it involves the irrationality of supposing that the oxygen, which is capable of answering other important purposes in the animal economy, is excreted in preference to that which, having already accomplished those purposes, has become effete, and been re-conveyed to the blood, in order that "it may be thrown out of the blood by the mouths of the secernents."

Having thus shewn that animal matter deprived of its vitality is a manifest source, both of carbon and oxygen, and consequently a source from whence the carbonic acid may be, we had almost said must be, derived, we have next to inquire how far the idea is compatible with the other phenomena of respiration. The circumstance of carbonic acid being generated, when there is no external supply either of oxygen or carbon, does not, in our opinion, admit of any other rational explanation; but there are certain difficulties connected with the idea of carbonic acid being excreted from

the blood, that is to say, of both the elementary substances being supplied by the blood, which we are now called upon to consider. "Those who maintain," says Mr. Ellis, "that the carbonic acid is not directly formed by the union of the oxygen gas of the air with the animal carbon, but that it escapes ready formed from the system, ought to point out some other source from whence, in sufficient quantity, the oxygen can be derived; to tell us at the same time what becomes of the oxygenous portion of the air which actually disappears; and why the carbonic acid bears always so constant a proportion to the loss of this oxygen gas." The two first difficulties are, we conceive, already removed, since the decomposition which is constantly going on in the animal body is an adequate source of the oxygen contained in the carbonic acid expired, and the conversion of the whole of the oxygen absorbed into an animal principle essential to the support of living action, is, in our opinion, a sufficient explanation of what becomes of the oxygenous portion of the air which disappears. The remaining difficulty might easily be removed by its denial, since it is in accordance with Dr. Edwards's experiments, "that the proportion of oxygen consumed to that employed in the production of carbonic acid varies from one-third of the volume of carbonic acid to almost nothing." There is, however, under ordinary circumstances, a degree of correspondence which requires an explanation. The lungs, according to our views of the respiratory function, are evidently organs of supply and of waste. Now it is a law of the animal economy that "there must be two distinct sets or systems of vessels; one by which the due recruit is provided, and the other by which the refuse or rejected part is removed. The health of this function consists in the balance of power maintained between these respective vessels, and its diseases in the disturbance of such balance." It might easily be shewn that this law extends to every individual organ, the health of its structure being dependent on a certain degree of correspondence between the quantities of fresh matter received, and of old matter removed. Why should the blood be exempt from this law? If a certain correspondence between the quantities of fresh oxygen received, and of effete oxygen removed, be necessary

to the health of the blood, we must presume that the functions of absorption, and of excretion, are, by an organization adapted to the purpose, capable of maintaining the balance required: by what mode is a distinct question, since our ignorance of the mode would be no argument against the fact, a fact which is so general in its application, as to constitute a law of the animal system.

We conclude, therefore, consistently with the foregoing observations, that the carbonic acid expired is wholly unconnected with the oxygen recently taken into the system; and that both of the constituent substances are derived from the debris of animal matter—from the decomposition which is perpetually taking place in the animal body.

Admitting that the carbonic acid is derived from the effete carbon and oxygen of the blood, how, it may be asked, is it formed? Is it generated by the union of carbon and oxygen in the blood, and then exhaled through the coats of the vessels, or secreted, that is to say, both formed and evolved by the action of these vessels? It would not be inconsistent with our views of animal life to admit the exhalation of carbonic acid, because the chemical process would be confined to the effete, that is to say, the dead carbon and oxygen of the blood; and we are far from entertaining the opinion that the influence of life extends to that portion of our bodies which has no life; which, having become effete, must be considered as deprived of its vitality. As, however, the purification of the blood by other organs is obviously accomplished by a secreting process, we are led by analogy to the conclusion, that such is the mode by which the carbonic acid is formed in the process of respiration. Is the florid color of the blood in any connected with the excretion of carbonic acid? It is a question of no great importance, inasmuch as the peculiar property of arterial blood cannot be rationally supposed to have any immediate connexion with its color. We learn by experiment, indeed, that a similar color is produced by the agency of oxygen out of the body, but the identity of this color with that of arterial blood is not so fully established as to justify the conclusion, that the florid color of arterial blood is wholly unconnected with the excretion of carbonic acid. We would rather say with Mr. Hunter,

that “the color of the blood is of scarcely any importance whatever, except as a proof that the blood has undergone the action of ventilation.”

Respiration, then, is not a chemical, but a vital process. Respiration is not a function in which the whole of the oxygen expended is united with carbon in the air-cells of the lungs, but in which the whole of the oxygen unites with the blood in its circulation through the lungs. Respiration is not a function in which the whole of the oxygen unites with the carbon of the blood, and is immediately evolved in the form of carbonic acid, but in which the whole of the oxygen is converted into an animal principle, and remains in the blood. Respiration is not a function in which the whole of the oxygen expended is absorbed by the blood for the purposes of being united with carbon in the course of its circulation, and excreted in the form of carbonic acid on its return to the lungs, but in which the oxygen is converted into an animal principle, for the purpose of being distributed, through the medium of the circulation, to every organ of the body. Respiration is not a function in which a portion of the oxygen expended is united with the carbon, for the purpose of promoting its excretion, but in which the whole of the oxygen expended is united with the blood, for the purpose, as we shall have occasion to shew, of being assimilated with the animal structure; the oxygen of the carbonic acid expired being wholly derived from the decomposition of animal matter. Respiration, in other words, is a function of supply and of waste—an animal process, by which fresh oxygen is absorbed, united with the blood, and converted into an animal principle, capable, when assimilated with the animal structure, of supporting living action; and by which effete oxygen and carbon are thrown out of the system—by which, in other words, the important and necessary process of purifying the body by the separation of the living and dead portions of animal matter, is promoted.

USE OF IODINE IN MORBID GROWTHS.

THE following are Mr. Brodie's remarks:—

I have employed iodine as an internal medicine in a great number of cases of morbid growth, without any manifest effect arising from its exhibition. In two cases, however, and in two only, it was productive of the greatest benefit, effecting that which I should scarcely have supposed that any medicine was able to accomplish.

In one of these cases, which I attended with Mr. Pennington, the patient labored under a tumor on one side of the tongue, and imbedded in its substance, of about the size of a nutmeg, of an irregular form, hard to the touch, and having a well-defined margin. The disease had existed between one and two years, gradually making progress; and it had resisted the internal use of arsenic, as well as a course of sarsaparilla, combined with oxymuriate of mercury. As the surface of the tongue was furred, and there were some other symptoms which seemed to indicate a deranged state of the digestive organs, we prescribed, in the first place, the *pilula hydrargyri*, with a gentle aperient, and a light bitter with soda. Under this treatment the tongue became clean, but there was no perceptible alteration in the local disease. We then administered the tincture of iodine three times daily in moderate doses, gradually increased. In a fortnight the tumor was evidently smaller, and at the expiration of about eight weeks it had nearly disappeared. The patient was sent into the country, being directed to continue the use of the iodine for some time longer. This was upwards of four years ago, and I have not seen the patient since; but I have been informed that the cure is complete.

The second case was that of a man who was admitted into St. George's Hospital on account of a tumor, situated on one side a little below the axilla. It was of the size of a small orange, unattended by pain, bearing no marks of inflammation, and quite moveable beneath the skin. Having removed it by the knife, I found, on making a section of the tumor, that it was composed of a brown solid sub-

stance, of a firmer consistence, and to all appearance more highly organized than fungus hæmatodes, and of an uniform structure throughout, except that externally it was covered by a thin membranous cyst closely adhering to it. Some time afterwards the same man applied at the hospital a second time, having two tumors on the neck, each of the size of a double walnut. These bore no resemblance to the common enlarged glands which occur in this situation, and so exactly resembled that which had been removed from the side, that no one entertained a doubt as to their being exactly of the same nature.

Conceiving that there were some obvious objections to a second operation for the removal of a disease so manifestly depending on a constitutional cause, and knowing nothing better to be done, I prescribed the tincture of iodine to be taken internally. Under this course of treatment, which was continued for several weeks, the tumors gradually diminished in size, and ultimately disappeared. I have heard nothing of the patient since; but as I told him that he should be received into the hospital again whenever he applied for that purpose, I think that in all probability he has had no return of the complaint.

I have no right to say, that in these cases the tumors were of a malignant nature; at any rate, they were not malignant tumors of the worst kind. I have, however, exhibited the tincture of iodine in many cases of truly malignant disease, and in a few instances, as it appeared, not without some temporary advantage. For example, I was consulted concerning a lady who was supposed to labor under a tumor of the breast: I found, however, on examination, that the breast itself was in a healthy state; and that in this, as in some other cases which have fallen under my observation, the apparent enlargement of the breast was the consequence of its being elevated by a tumor beneath it. The tincture of iodine was given internally, and under its use the tumor became so much reduced in size, that I had the credit with the patient and her friends of having cured an obstinate disease. The amendment, however, was of short duration. Soon after discontinuance of the medicine, the tumor began again to increase in size;

and the iodine, which was a second time administered, had now no dominion over it. The patient ultimately died, and on inspecting the body it was ascertained that there was a medullary or fungous tumor, which had its origin in one of the ribs below the breast and pectoral muscles. The same disease existed also in other parts of the body*.

NITRE A REMEDY FOR SCURVY.

In a letter, or report, from Mr. Charles Cameron, a naval surgeon, to the Navy Medical Board (with a sight of which report we have been favored by one of the medical commissioners), there is given an account of a severe scurvy which broke out among the convicts on board the Ferguson transport, on her passage from Ireland to New South Wales, and which threatened to depopulate the crew, till fortunately it was checked by a solution of nitrate of potash in vinegar, or in a mixture of vinegar and lemon-juice. The convicts, 216 in number, were embarked on the coast of Ireland in November 1828, and were then in a low state of health, from deficient nourishment and the depressing passions. Bad weather was experienced on the early part of the voyage, and the convicts suffered greatly from sea-sickness. Their constitutions were thus still farther debilitated, and before the ship crossed the equator the hospital was full of scorbutic patients, and many others were confined to bed, in a dangerous state. The disease assumed a variety of forms, or rather a number of other complaints became engrafted on the scorbutic diathesis, and were thereby rendered much more formidable. Dysentery, however, was the most prominent feature or form, and affections of the lungs were also very common. Two of the men died of the scorbutic dysentery. When they were preparing to bear away for Rio Janeiro, in order to procure refreshments for the sick, Mr. Cameron tried an old remedy recommended by Patterson many years ago, in his Treatise on Scurvy—namely, nitre. The common stock of this being soon exhausted, a supply was procured from the gunpowder on board.

The effects Mr. Cameron describes as almost miraculous—so much so, that they abandoned the idea of putting into Rio, and pursued their course to New South Wales, where the convicts landed in unusually good health. The formula and mode of administration will be seen in the following extract:—

“But I might add, that the most distressing symptoms which my patients complained of, in the early stages—namely, a sense of ‘oppression and sinking at the pit of the stomach,’—were almost invariably relieved, or totally removed, by a few doses of the medicine. The prisoners themselves were so sensible of its good effects, that I had, for the first time, an opportunity of seeing men crave for medicine, the taste of which was certainly not pleasant; and their complexions were so much improved under its use—changing from a sallow, bloated hue, sometimes approaching to livid, to a clear, healthy color—that it became matter of surprise to every one.

“The medicine was prepared and exhibited in the following manner:—Eight ounces of nitre were dissolved in so much vinegar as would make the solution amount to sixty-four ounces. Sometimes equal parts of vinegar and lime-juice were used. A little sugar was generally added, to render it more palatable; and about four drops of oil of menth. piperitæ, diffused in a small portion of alcohol, was added to the whole, which rendered it more grateful to the stomach.

“One ounce of this solution was the dose, and was seldom exceeded. From three to eight doses, according to the stage of the disease and the severity of the symptoms, were given at equal intervals during the day—from six o’clock in the morning till eight at night. In general, when the disease was taken early, two or three doses a-day, for a week or ten days, were sufficient; but it appeared to me to be always better to commence with three or four doses, and increase the number gradually—daily if necessary. In the advanced stages, a much larger quantity may be taken, and is in fact required, than at the commencement of the disease; but although I have often given the solution to the extent of eight ounces daily, and on one or two occasions exceeded this quantity considerably, and have at the same time watched my patients very

* Seymour's Illustrations of the Ovaria.

closely, I never observed any irritation of the stomach or bowels, or any other inconvenience which could be fairly attributed to it. It is, nevertheless, advisable to dilute each dose with two or three ounces of water when exhibited. While the constitution is thus being corrected and improved, particular symptoms will require the usual attention.

"It is perhaps proper to notice that about two years ago I had occasion to give a solution of nitre in water a fair trial, in several bad cases of scurvy, where neither vinegar nor lime-juice could be obtained; and, except that sometimes it did not appear to me to sit so easy on the stomach, with the same good effects on the disease*."

DIFFICULTIES OF LITHOTRITY.

THE instrument for the operation of lithotrity which has been obtained for this hospital (Glasgow Infirmary), is one made by Weis of London, and appears to be nearly the same as that described by Civiale, in his treatise "*De la Lithotritie*," and delineated in the 2d plate of that work, fig. 12; but without the apparatus attached to it for injecting the bladder. It is the instrument "*à trois branches*," very frequently used by Civiale, and I believe still employed by him; and which Baron Heurteloup has lately been endeavouring to shew is so inferior to his own.

The want of an apparatus for injecting the bladder through the tube, without the necessity of withdrawing the instrument, is certainly a great defect; although, as the lithotriteur cannot be removed but by the vesical end of the instrument, it is not easy to understand how the bladder can be distended even by the apparatus of Civiale, the canula being completely filled by the lithotriteur.

In every case of stone where the disease has existed for a long time, the bladder becomes extremely irritable, and, from the frequent micturition, is generally in a contracted state. When such an apparatus, therefore, is introduced into a bladder thus diseased, and moved freely about in its cavity, it will almost immediately contract forcibly and expel its contents along the side of

the instrument, notwithstanding the utmost efforts of the patient to prevent it. This occurred in the case above detailed, and will always be very apt to happen in similar instances. When it does happen, it is evident that the instrument cannot be used. If it be opened, and the stone attempted to be grasped, it is not unlikely that, in place of the stone, a fold of the bladder will get between the branches; and then, if any farther attempt is made to disengage the bladder, by opening the branches a little more, that viscus all the time forcibly contracting upon it, the chance is that a greater portion will be thrust between them, and the mischief will be almost irremediable; the instrument cannot be withdrawn without bringing a portion of the bladder along with it. The apparatus for injecting the bladder through the instrument, would evidently be of great utility when such an accident occurs; for until that viscus is again distended, the branches cannot be opened and closed without considerable risk.

From several trials which I have made with this instrument, I certainly consider it a *sine qua non* that, in the use of it, the bladder should be distended with fluid to a considerable size; and, notwithstanding that Civiale himself asserts that the fears regarding injury to the bladder during lithotrity are imaginary, it must appear evident to every one who thinks upon the subject, but more particularly to all those who have attempted the operation, that unless the bladder contains from twelve to twenty ounces of fluid, the muscular fibres of that viscus, so generally enlarged and elongated in stone patients, are extremely apt to be seized and injured. In a case where this instrument was used last summer, by a practitioner in town, this took place in some measure, although, from the patient being a female, the fold of the bladder was much more easily disengaged from the instrument, than it could be in the male subject. That it must have occurred to many others who have been in the habit of attempting lithotrity, I am quite satisfied.

In many cases of stone in the bladder, probably in the great majority, that viscus is so contracted and so irritable, that it cannot be made to hold more than a few ounces of fluid, and that for a very short time, so that the

danger of injuring its internal surface is, I conceive, the principal objection to this method of treating calculus, and one perhaps less easy to get quit of than any that has been made. In all the cases where this operation has been tried, we read merely that the bladder was injected before beginning to operate, but it is not said how far this injection could be carried—how much water the bladder could contain. The risk of injuring the bladder, therefore, forms the chief difficulty which is experienced in seizing the stone, although this part of the operation of lithotomy will never be easily effected, except by one who has often attempted it, and has made himself perfectly acquainted with the instrument. I have been told by those who have seen Civiale operate, that while surgeons, the most experienced in other operations, always found difficulty, and were often foiled in this, he himself was perfectly at home in the use of his apparatus, and could take hold of the stone in a very few seconds. This dexterity can only be acquired by long practice. It is related in the *Gazette de Santé*, that Dupuytren tried this operation repeatedly in a middle-aged man, but always failed, while in the same patient, Civiale by six operations performed a complete cure, although the stone was of considerable size, and the general health bad.

The mere difficulty of seizing the stone, although an objection to lithotomy, is one to those only unaccustomed to operate, and can therefore be overcome by perseverance and practice; but that which arises from the risk of injuring the bladder is much more formidable, more difficult to obviate, and must apply to a very great majority of stone patients*.

MEDICAL GAZETTE.

Saturday, March 13, 1830.

"Licet omnibus, licet etiam mihi, dignitatem Artis Medicæ tueri; potestas modo venendi in publicum sit, dicendi periculum non recuso."—CICERO.

THE LATE DR. GOOCH,
A SHORT biographical sketch of this

* Dr. Weir's report of cases treated in the Glasgow Infirmary.

119.—v.

lamented physician will not be uninteresting to our readers at the present moment, as it is probable that the more extensive memoir, which we understand is in preparation, will be a considerable time before it makes its appearance.

Dr. Robert Gooch was born in June 1784, and received the rudiments of his medical education at Great Yarmouth, as an apprentice to Mr. Borrett. He afterwards became a student at the Borough hospitals, from whence he proceeded to Edinburgh, where he took his degree of M.D. in June 1807. Circumstances, however, led him to begin his professional career as a general practitioner; and he settled at Croydon, in partnership with Mr. James. Severe domestic afflictions induced him, after two or three years, to give up his partnership, and he began life a second time as a physician accoucheur in this metropolis. At first he resided in Aldermanbury, but was soon encouraged by his friends to remove to the west end of the town, and he took up his abode in Berners' Street. Several opportunities now occurred of bringing him forward in the eyes of the public. On the death of Dr. Thynne he succeeded that eminent practitioner as physician to the Westminster Lying-in Hospital, and as lecturer at St. Bartholomew's; and shortly afterwards he was appointed physician to the City of London Lying-in-Hospital. Success in practice rapidly followed, and was only limited by a constant state of bodily weakness and ill health, which frequently obliged him to leave London for weeks, and even months together. After six months' continued absence in the country last summer*, he returned to town in October, and once more resumed the active duties of his profession; but at the beginning of the late severe weather he again gave

* It was at this time he sent the letter published in this Journal of June 13th, 1829. Alas! how melancholy will be the smile with which that letter will be now read.

way; and after six weeks of rapid decay, died on the 16th ult. at the early age of 45.

Whilst, however, Dr. Gooch was thus constantly weighed down and broken by bodily indisposition, his mind shone out vigorous and strikingly unimpaired. Naturally endowed with great talents and remarkable acuteness of understanding, he added to them a highly-cultivated taste, and much scientific and literary acquirement. Upon the promotion of Dr. Charles Sumner to a bishopric, the office of principal librarian to the king was conferred on Dr. Gooch, — an office delightful to him from his fondness for general literature; and honorable especially, from its being, we believe, the first instance in which it was ever held by a medical man. Dr. Gooch's medical writings are too well known to the profession to require enumeration here; but besides his acknowledged productions, he at various times enriched several of the periodical publications, both medical and otherwise, with anonymous contributions. Many of these are now well known to have been his; but we may particularly allude to the able articles in the *Quarterly Review*, one on contagion, and the more recent one on the anatomical bill, to which we directed the attention of our readers in a former number. He was also the writer of various papers in this journal. His volume on the Diseases of Women, published last May, is already out of print, and will be ever considered a standard work. It is an interesting fact that nearly all of his writings were composed whilst confined to his bed by sickness; and often, when too feeble to hold his pen, he would dictate page after page, with a mind as active and powerful as ever.

As a practitioner, Dr. Gooch was eminently successful: he seized, with consummate tact, the minute distinctions of obscure diseases; and whilst no one

was more unfettered by blind submission to authorities, he was always ready and anxious to attend to the suggestions of others, however young and inexperienced. As a lecturer, Dr. Gooch was particularly striking and attractive, and the same may be said of him in his conversation; in both respects he was noted for his clear and graphic descriptions, apt illustrations, and for his lively as well as impressive remarks. His language was peculiarly simple, and at the same time terse, forcible, and well chosen; and few could listen to him on any subject without a speedy conviction that he was no ordinary person.

To those who were not personally acquainted with Dr. Gooch, this slight sketch of his character may appear as merely one of the common-place eulogiums of a surviving friend; but to all who had the happiness of living on terms of intimacy with him, it cannot appear over-charged, however it may be considered feeble and inadequate.

COLLEGE OF PHYSICIANS,

Monday, March 8th.

SIR H. HALFORD, BART. IN THE CHAIR.

THE conversazione last Monday was numerously attended, and among the visitors present we observed the Duke of Somerset, the Bishops of London and Bristol, the Dean of Chester, Mr. Davies Gilbert, Mr. Bankes, Sir Robert Ker Porter, &c. &c.

Two papers were read—and remarkably well read—by Dr. F. Hawkins, the Registrar. The first of these, by Dr. Barry, was a valuable and important communication on the subject of the late

Epidemic Fever of Gibraltar.

From this paper it appears that the public health was excellent up to the middle of August, when two young persons, son and daughter of a bumboatman, died in one of the highest districts of the town, within three days of each other, with yellow skins and dark-co-

lored vomiting. A boy, their companion and neighbour, sickened after the death of the first, presented the same symptoms, and recovered. Minutes of this last case were fortunately taken at the time by two medical gentlemen, who call the disease "*febris remittens*;" but there appears to have been but one febrile paroxysm, attended by dark-colored vomiting, yellowness, and delirium, terminating on the fourth day, in rapid and permanent convalescence.

From the seizure of the first of these children (dead on the 17th August) up to the 2d September following, the spread of the disease was limited to the neighbourhood of their father's house. It then shewed itself amongst the troops in the person of a sergeant, who lodged in the infected district. This man's case, drawn up also at the time, terminated in yellow skin, dark-colored vomiting, and death on the fourth day. Between these two dates, 50 persons were attacked, of whom 6 died, all in the same vicinity, viz. District No 24 of the town.

After stating that 5543 cases occurred from August to Christmas, of which 1631 were fatal, Dr. Barry declares that the disease consisted of a single paroxysm of fever, terminating from the second to the sixth day, either in a rapid return to health, or in the almost certain precursors of death—hiccup, black vomit, suppression of urine, and passive hæmorrhages from the natural orifices.

The most constant anatomical characters were a bright, fawn-colored, mottled appearance of the liver, as if it had been partially immersed in boiling water; with black fluid in the stomach and small intestines.

Dr. B. gives no name to this disease, and thinks that it would have been better, both for science and humanity, if it had never received any, particularly the name of "*bilious remittent fever*," which, by robbing it of all claim to a pestilential character, may have delayed the adoption of preventive measures of segregation, or modified their energy when determined on.

The beautifully-executed plan of the town and territory of Gibraltar, which accompanied the paper, shews that the communication with Spain was not cut off, nor the inhabitants of the infected district sent into camp, before the 5th of September.

The doctrine of the non-liability of the human constitution to a second attack of this disease, so strongly insisted on by Dr. Pym, the first of our English writers who notices this interesting and important peculiarity, seems to be fully verified by the facts contained in this paper. The following is very strong on this point.

Of 164 military attendants in the regimental hospitals, 141 caught the disease; whilst of 61 civil attendants, 2 only were attacked, who had not had the disease before: the other 59 had all passed it in some former epidemic.

In speaking of the alleged possible sources and causes of this destructive disease, Dr. B. asserts, and it would seem upon unquestionable authority, that the population of all classes, so far from being dense, had never exceeded 21,000 for three years previously to the breaking out of the epidemic, scattered over a surface of more than three miles long, by a quarter of a mile broad, besides the Bay, the Neutral Ground, and the village of Caleta; that the public health had been but little interrupted for thirteen years, during which period the comforts and accommodation of the people and the troops, as well as the cleanliness and municipal establishments of the town, had been brought to a high state of improvement; that no natural phenomena, different from those of the five preceding years, had been noticed in the spring or summer of 1828. With regard to the drains, he refers to the plan, in order to shew that in the sewers of the higher levels of Gibraltar there can be no great accumulation of filth at any time.

He next asks, could the source of this disease have been found on board any of the ships that arrived at Gibraltar, from the West Indies or South America, during the summer, and from these ships brought on shore?

The author of the paper seems to incline to the affirmative of this question, by stating that as many as ten persons had died on board of ships on their passage from these countries to Gibraltar; that three persons had been sick on board of one vessel whilst she lay in Gibraltar, which had nine sick of *some fever* on her passage from the Havannah, two of whom died; that the sister of the health-guard of this ship was attacked on the 21st August, after having washed, on the 11th, the

clothes which her brother had used on board; that a man was admitted from this ship into the Civil Hospital at Gibraltar on the 6th August, as "*febris intermittens*," but had no paroxysm of ague after his admission; and finally, that the three young persons first attacked, had been on board some ship, in their father's boat, the Sunday before the first of them fell ill.

As to the treatment of the disease, mercury, with a view to a rapid affection of the mouth, early and determined bleeding, oily and other mild aperients, are the only modes noticed. Of these the first was the *least* successful, the last the *most* so.

Seven cases with yellowness of the skin were noticed in Gibraltar from May to September last year, but from the description, they appear to have been *icterus*, with more or less fever.

The Siamese Youths.

After Dr. Barry's paper, a neat and amusing account of the Siamese boys, drawn up by Mr. Mayo, was read. Our readers have all, probably, seen this *lusus naturæ*, which has been carried from Siam to the New World, as well as to Europe, in this philosophical and money-making age. The age, however, is eminently philanthropical besides; and we have little doubt, from the cheerful appearance of the Siamese boys, whom we saw at the College on Monday evening, that their proprietor takes a genuine interest in their well-doing and comfort.

Mr. Mayo described the band which joins the boys together as entirely pervious, swelling like an old hernial sac, *through its whole length*, when either coughs; so as to leave no doubt that the abdominal cavities freely communicate, or have, with distinct viscera, but one peritoneum in common. The attempt to separate them while both are living, would therefore be full of danger.

The integument covering the connecting substance is perfectly sensible, except at the umbilicus; the cicatrix forming which appears to have rather less feeling than the surrounding skin. There is no part at which both systems have a common sensibility. The transition, again, from the surface upon which the one feels; to that which conveys sensation to the other, is abrupt. There is no neutral space intervening. On pricking the front of the connecting

substance at successive points, not a line apart, the first touch of the needle that the one ceases to feel is distinctly perceived by the other.

There is, in the upper part of the connecting substance, a joint between the ensiform cartilages of the two boys, which project forward each about an inch, and meet rather obliquely.

Anatomical Models.

We saw upon the table of the College Library a model, in wax, of the base of the brain, representing the origins of the cerebral nerves. It is very exact, and, we learn, is the first essay in anatomical modelling of Mr. William Tuson, whose models of flowers and fruits, for the Horticultural Society, we have often admired. The model at the College was executed under the superintendence of Mr. Mayo. It is the first of a series upon which Mr. Tuson is employed, intended to illustrate the anatomy of the brain according to the method of Reil.

We understand that Mr. Tuson has Mr. Mayo's permission to sell duplicates of these models, and that he is to be heard of at Messrs. Burgess and Hill's, Great Windmill-Street.

ROYAL COLLEGE OF SURGEONS,

Tuesday, March 9.

Early History of Anatomy and Surgery—late Anatomical Bill—its Disadvantages, and the principles on which it was opposed by the Council of the College of Surgeons.

MR. GUTHRIE delivered his first lecture for the season in the following words:—

I have now, sir, to complete the observations that I had the honor to address to you at the commencement of the last season. It will probably be in your recollection, and in that of this learned body, that I ventured to draw your attention to the necessity of, and the advantages which arise from, the study of anatomy: not that kind of anatomy alone which enables a man to go through the common routine of useful duties—not that anatomy which will enable him to perform an operation with a tolerable degree of propriety; but that more comprehensive anatomy which leads to the investigation of every part of the animal and vegetable kingdom; and by a comparison of which with those parts that

are peculiar to man, we may ultimately arrive at a knowledge, not only of the more intimate structure, but the functions of those parts, an acquaintance with which we have not hitherto attained.

I said on that occasion that I hoped the period would arrive when, under the auspices of this College, the study of anatomy, on the plan that I have laid down, would be clearly and distinctly adopted. It is only under these circumstances, and under an arrangement of this description, that we can hope ultimately to arrive at that complete knowledge of the science of anatomy which it is so desirable to attain.

I drew your attention to the antiquity of the science and art of surgery. I pointed out to you, from the earliest records, the connexion that was observed between the management and treatment of diseases, and the management and treatment of injuries. I shewed you that one was attempted to be done by prayers and incantations, while the other was accomplished by the efforts of those individuals to whom the unfortunate sufferers were entrusted; and I shewed you, by quoting from Homer, the high consideration with which one of the principal surgeons—himself a prince—was treated, and the anxiety which he evinced when he himself became a sufferer. It was not necessary, however, to go back as far as this; it was only necessary to go back as far as the days of Hippocrates, Celsus, and Galen, and we should find that all those persons attained the highest consideration in the different countries in which they lived; while we observe that they practised alike the science of medicine and that of surgery.

It is a peculiar circumstance, and one that has extended its influence even to the present moment, that the distinctions which arose on this subject originated in religious prejudices and superstitions. The first inroad on surgery was made by the Arabians. Science, in the 12th century, had been overthrown almost entirely by the barbarians of the north; and it was the Arabians by whom it was again restored: it was under them that surgery was, to a certain degree, recuscitated. But there were some points on which religious prejudices would not allow them to interfere—there were

certain diseases which these prejudices would not allow them to treat; and those men who had acquired a knowledge of general science, and who had also devoted themselves to the study of physic and surgery, abandoned the important office of the latter to an inferior set of people. This inferior set of people (inferior only in knowledge and in science,—equally capable with themselves, perhaps, in other points) would naturally by degrees assume more—take more upon themselves, in order to attain a better remuneration; and we find, through this circumstance, that they gradually obtained all the offices of surgery to themselves, whilst the highest duties, and those more particularly appertaining to physic, devolved on the persons whose religious prejudices prevented them from practising on the others.

It was only in the 12th century, and among the Arabians, that the separation of physic and surgery took place; and when learning was restored in the west, by a very peculiar concurrence of circumstances the same thing again occurred. The restorers of learning were the priests, and the priests possessed with their religion, and, I may say, with their superstitions, the same prejudices on this subject as the Arabians. They adopted and devoted themselves to those peculiar branches of science which related to the healing of internal diseases; and equally with the Arabians abandoned the external operations to an inferior set of people. We find then that surgery, instead of being practised, as it was in the early ages, hand in hand with physic, was abandoned by men of learning and knowledge, and was left to a set of people who were in a great measure destitute of both.

The difficulties, then, that were thrown in the way of the art and science of surgery, arose at that early period from religious prejudices, and they were only got over in consequence of the importance to mankind of the art which had devolved upon inferior people. It was impossible but there must have been some among them who were well aware of the advantages which resulted from the art, and of the opportunities which it gave of relieving the sufferings of humanity;—it was impossible but there must have been some among them who would gain peculiar eminence in

the art, and thereby attain the confidence of the greatest people in the country.

We find in the 12th century Pitard doing that for the surgeons of France which has been followed by many of his successors: we find him devoting his influence, not to serve any private purpose, but to collect together the scattered remains of surgery, in order to constitute a college, and to appoint professors to perform the part of examiners, with a view to grant certificates of knowledge to those who excelled. Pitard, in the 12th century, did much; and Philip the handsome, of France, confirmed what he had done in the year 1311. In the beginning of the 16th century, the art and science of surgery had made great progress: surgery at this period was fast approaching to what it had been at an early period; but the restoration of it, I may say, to its former eminence, was viewed by many persons with considerable jealousy; and in France, in the year 1615, the barbers obtained the right of calling themselves surgeons, and were admitted without examination as to their knowledge of the art. It was only in the last century, in the year 1731, that the academy of surgery was established in France; and it was at a still later period that the separation between barbers and surgeons took place in Great Britain—namely, in the year 1745, when the corporation of surgeons was instituted; while the establishment of the Royal College of Surgeons only took place at a period within the recollection of many who now hear me.

We see, then, that for a period of more than six centuries surgery remained in a separated, and in some degree in a degraded state, in consequence of the want of activity and zeal in its professors, and in consequence of peculiar and often absurd religious prejudices. I shall have occasion to shew you, in the course of these observations, that some of these prejudices remain at present, and interfere materially with its advancement.

I am not going to say to you that the separation of physic and surgery has not been advantageous to mankind at large; I say, on the contrary, that I am sure it has rendered essential benefits to the community; but I do mean to say, that the education required for the one class of men should

be equally imperative upon the other. It is an important feature at the present moment on the continent of Europe, particularly so at the University of Paris, that to obtain the degree of Doctor of Physic, or Doctor of Surgery, the course of education required is the same: there is only one slight difference—that is, that on the last day, and, I may say, at the last question, the candidate is required to write his thesis on a disease which is purely internal, or upon one that is purely external;—that is the only difference that exists between them. And I should say to you, (not being desirous to occupy more time than is necessary on this subject,) that a surgeon will only attain to the high station that he ought to do in this country when the education of all branches shall be alike.

It is not merely necessary for a man to be a good surgeon that he should be a good anatomist, but he ought also to be that which is called a good physician. He ought to possess the same degree of knowledge—and that acquired by laborious study at the bed-side of the patient. It is not those diseases only which are peculiarly surgical which ought to be the object of his attention; but equally so, and even more so, those which are usually considered as the business of physicians. It is quite impossible to know what the derangements are that take place in the human constitution, under external accidents, unless he is acquainted with those diseases which are nearly similar, occurring from other and different causes. The knowledge of anatomy, I may say, is turned to the least advantage if, whilst the student, considering what are the functions arising from and connected with the natural structure of the human body, he does not at the same time seek, and endeavour to make himself acquainted with, those alterations which are the consequence of disease. Now he goes a step farther, and makes himself acquainted with those means by which these diseases are to be remedied. I say, that to be a good surgeon, in the clear and fullest sense of the word, it is necessary that a man should be as thoroughly and intimately acquainted with the symptoms of disease in general, as a laborious attention at the bed-side of the patient will permit.

I endeavoured therefore, on a former occasion, to shew you that, in order to

raise the art and science of surgery to that estimation which it ought to attain in the scale of public occupations—in order to raise it to that fame which it formerly held in the earliest period of our history—it is necessary that a medical man should take that course which others find essentially necessary for the advancement of their professions, though they are of less importance to the interests of mankind. We find in all and every one of these, that persons are not content with making themselves eminent in the particular branch which they are destined to follow, but they endeavour to attain for themselves a knowledge of the various circumstances connected with the community to which they belong; and by shewing their knowledge of affairs in general, they attain to that public estimation which they would not otherwise occupy.

I pointed out, on a former occasion, the necessity which existed for those among us who have attained the highest honors of the profession, who have acquired not only independence of mind, but independence through the medium of riches—to be represented in the great council of the nation—where all occupations—where all professions—where every trade is represented, except the practitioners of physic and surgery (loud cheers). If that were the case, those evils which we have seen—I may say befall, or about to befall us, within the last few months—could never have taken place. We should not have had further barriers placed upon anatomy and surgery; barriers which have been hitherto avoided, but are still impending. I would bring to your recollection Dr. Friend, the man who published one of the best histories of physic which we have; he was not only an accomplished physician, but a member of the legislature. If at the present moment we possessed men similar to him, we should then find anatomy and surgery advance in a different ratio from what they have done of late years.

I have endeavoured, gentlemen, to impress upon you the importance of the study of anatomy; but that study, I say, is at the present moment prevented by those same religious prejudices which interfered with the proceedings of our forefathers six centuries ago, not only among the Arabians but among the Christians. I must

advert to a variety of discussions, and to a variety of circumstances, which have rather heightened and supported these prejudices than led to an abandonment of them. The legislature has decided, for a great number of years, that a certain number of persons should be devoted, not only to that study, but that they should have subjects to anatomize. It has pointed out, not only in this country but in others, that the bodies of murderers should be given up for dissection. I do not deny that a certain degree of stigma has been attached to this point—I do not deny that the dissection has been added, certainly not as a favor to those persons, but as an additional testimony of the abhorrence of mankind of the crime which they have committed. It has been argued by many of us—it has been argued in a late publication ("The Quarterly Review,") by a very meritorious and amiable physician, now no more—that it is this which has caused the continuance of the prejudices which exist among the public at large at the present time against dissection. It is a question that is not easily met; because, when you say to a person, shew me the proof of any individual having refused to be dissected because murderers are dissected?—they cannot shew you that proof. I can only say that my belief is, that the prejudices which have recently been disseminated throughout the public mind, have not arisen from this particular circumstance. It becomes necessary, then, to refer to other countries, and see if we can find among them proofs either for the support or for the overthrow of this opinion. In Ireland, I believe, those invested with judicial functions well know, that when a man is ordered to be executed, his nearest relations entreat those functionaries, in the most earnest manner, in order to prevent the body from being given to dissection. In no country in the world is dissection more freely and more fairly carried on than it is at this moment in the city of Dublin. Whilst it is endeavoured to be instilled into the minds of the profession here, that it is because murderers are dissected that subjects are not to be procured, we find that the profession in Dublin take an opposite course. We find that they are fully convinced and satisfied that it has no influence upon the public mind. We find that

there is no place where bodies are obtained so readily (they are obtained almost for nothing);—there is no fear of dissection; they are capable of doing as they please;—yet we find them actually selecting the bodies of murderers—not only seeking them for dissection, but publishing, in the face of the whole country, the experiments performed upon them. But if any ground of suspicion that the prejudice depended on the anatomizing of murderers were entertained, this would be most indiscreet, and might put a stop to the freedom of dissection which at the present moment prevails in Dublin. We find, on the contrary, that they not only open these subjects, but perform experiments upon them, and publish the result in the newspapers. We see that they are not afraid of these descriptions going forth, and we may therefore reasonably and fairly suppose that there is an error upon this subject. In this review it is said, “Let the profession refuse to dissect the bodies of murderers, and throw that obstacle in the way of the laws; let them refuse to do what they are called upon to do, and it must be abandoned.” If gentlemen had considered a little before they wrote— if those who spoke in this manner had referred to the laws of their country—they would have found that the charter of this College is held by the tenure that we shall find a place for the dissection of murderers. It is said, that if no person can be found to hang a criminal, the sheriff must do so himself;—and if no persons can be found to dissect a criminal who is sentenced by the laws to dissection, my learned colleague and myself must perform that duty. I can say for myself, and I believe can say for him, that we shall always be ready to do it (applause).

I think, then, that this has no influence upon the public mind. I believe it is quite a mistake, and that the abolition of the practice would do nothing for the removal of the prejudice; it is a practice, however, that I presume may be abandoned with very little inconvenience. It is even within my recollection that murderers and others were gibbeted, and this gibbeting was supposed to be a necessary punishment, to deter others from committing the same offence. I am of opinion that it never was of the least use, and that it

did not prevent a single individual from committing the same crime; but it was abandoned for a different reason. The sight of a gibbet was objected to by many people; the smell was disagreeable to others; the croaking of the gibbet was alarming to the ladies, and three or four miscarriages took place in consequence of it (laughter); and these circumstances led to the abandonment of hanging men in chains. Now really I believe that no inconvenience has resulted from this part of the punishment being done away with; and if the legislature were to do away with the dissection of murderers, I do not think that great evil would result to the public from the loss of the example. It came within my own knowledge that three men in a regiment were to be shot for deserting. This was supposed to be an example that was irresistible, and the whole of a large garrison were turned out to see the execution. What was the consequence? Why, it gave an opportunity for desertion; and while they were actually shooting three men for this offence, three others, taking the advantage of the absence of the regiment, deserted in a similar manner, and made their escape (laughter). So far, indeed, hanging or shooting may deter men from committing crimes or deserting, if they know that they shall be shot or hanged as the consequence; but I verily believe that the mere sight of the punishment has little influence in preventing the commission of crime.

I have reason to think in my own mind that we have misunderstood very much this point among us; but certainly it is not for medical men to point out the ways and means by which a proper supply of subjects is to be attained; it is for the legislature to decide this, and it is only for us to receive them with the thanks we ought to do, as the means by which the science and art of anatomy may be more freely studied. We should be careful to receive this boon, not only with due thanks and submission to the authorities that bestow it, but, on the other hand, we should also be particularly careful to receive it *free*. It should be a free boon, as it is really intended by the public; it should not be clogged with reservations—it should not be loaded with impositions, which are themselves destructive of the science, and which are dishonorable to its cultivators. It

is absolutely necessary that many of those points which are endeavoured to be forced upon us should be abandoned; it is absolutely necessary that we should turn our minds to the resistance of those things which are dishonorable to us as men,—dishonorable to our characters as physicians and surgeons. It is of the highest importance, then, to receive the boon unclogged with improper reservations, and to this point I shall now, in general terms, draw your attention. I shall lead you, I hope, to feel that it is your duty to resist every attempt that can be made which is dishonorable to us in the slightest degree, either individually as physicians and surgeons, or to the occupation which we have the honor and delight to follow.

In the late provision that was about to be made in parliament, certain commissioners were appointed, or proposed to be appointed, for granting licenses, and it was said in this that the majority should not be physicians and surgeons. Now I do not know why it should be stipulated that the majority of the commissioners appointed to promote the study of anatomy and surgery should not be composed of medical persons. As it is proposed that this measure should relieve the men who practise the art of physic and surgery, are they not better acquainted with the subject than others? Why was the reservation? But let us proceed, and the reasons will be seen. It was again said, that if a certain portion of this assembly should decide to grant a license, the license should not be signed by medical men only, but that there must be the signature of a lay commissioner among them. Here it is hinted that you would act dishonorably and unjustly.

Further: if we might name as commissioners the heads of this and the other college, although it was permitted to any two to call a meeting of the commissioners to grant licenses, yet if the two most eminent men I have alluded to had done so, it was necessary that they should obtain the sanction of a lay commissioner before they even proceeded to ask for a meeting to be held. I do feel that attempts of this kind are dishonorable to the profession, and I feel that this is a point that ought to be resisted. I shall only add, that at present it has been resisted, and I trust that we shall continue to do so with success.

This was not all. I have said that the study of anatomy ought to be cultivated with the greatest freedom, and those that said they would endeavour to serve us have declared that it was their intention that it should be so: yet you will find that the very first provision that was made was to impose a tax of five guineas upon every person who taught publicly the art and science of anatomy. I confess that it appeared to me most strange, and it must appear equally do so to you, that the means by which the science of anatomy was to be advanced, and by which the difficulties were to be removed, was the imposition of a tax. It was not only a tax upon the teacher, but a tax upon any individual who dissected a body for his own instruction. The party must attend for a license, for which he was under the necessity of paying two guineas. Conceive for a moment the situation in which you would be placed. You are called upon to perform an operation which you have not performed before, or which you have not done for years, and you feel it to be your duty, if a body can be obtained, to go through a dissection of those parts which are concerned in the operation. If you have not taken out a license, which can only be had once a quarter, why then you are placed in the disagreeable situation of being liable to be summoned by a common informer, and fined before a magistrate in the penalty of £50! I cannot conceive why it is necessary that a license should be required—why it is necessary that it should be paid for under such circumstances. I would say that it may be advisable that a public teacher should be held responsible for what he teaches, which may be done by a license; but I say that it is discreditable to propose that any individual in private life should be exposed to the necessity of taking out a license because at some period within the year it may be necessary for him to make a dissection!

There is only one conclusion to be drawn from this, and that is, that the object was—taxation, and to make a place with the money so collected. To what purpose was it to be appropriated? I, for one, should be satisfied if it went towards defraying the debt under which the country is laboring (a laugh); but no such thing. It was for the sole purpose of making a place—for the sole purpose of appointing a clerk who should be dependent upon the com-

missioners. This was the object. It was stated that a part of this house might be adapted to the purpose, and that it was not necessary that any secretary should be employed and paid by a tax levied upon the science of anatomy, levied upon all the surgeons throughout the kingdom; but this offer was refused by the proposers of this measure in parliament. It was refused, because it was said that if any of the commissioners were to get within these walls, it might give a semblance to their identity with the constituted,—the chartered bodies of the country. It is for this reason—to gratify these feelings—that the whole profession in Great Britain were to be taxed five guineas, or two guineas, according to their peculiar circumstances.

But still more. It was not only necessary that they should be taxed on every occasion, but you find it was within the proposition, that after they had obtained this license, and a body had been delivered to them, they were to bind themselves to bury every part of it that might remain after the dissection had taken place. Why the main and great object of dissection would be thus totally destroyed. When a student dissects a body his object is to keep it, that he may have it before him as a constant source of reference; that when he meets with an injury or an accident that he does not understand, he may refer to that portion of the body which he has dissected, and which he has preserved for this particular purpose; and by making a particular comparison, it is more than probable that he will adopt the right mode of treatment, and thereby prevent the mischief that would otherwise take place. Such a measure is doing away with the object of dissection, and instead of facilitating the study of anatomy and surgery, it is doing that which is the best calculated to prevent it. And mark, if this were not done, he was to be subject to a penalty of £50! Further: he was not only subject to inconveniences of this kind, but to be visited by persons who, perhaps, did not understand the objects that were going on, and such persons had authority, if they pleased, to bring him from the most distant part of the country to London, and here he could only claim those reasonable expenses that might be considered as paying for his journey; and if he re-

fused to attend the summons, he was again subject to a penalty of £50!

I should say that the bill proposed last year was the worst that could be presented for that purpose—I should say that the bill is open to the imputation of harm—said every thing it did not mean, and meant every thing it did not say (much laughter). There was no part of the bill that had not a double meaning. There was no part of the bill that fulfilled the object that it was intended to accomplish, because the object was not expressed. There is one flattering consolation in this bill; the first object was taxation, the second object was a job (laughter). Now the individuals who proposed that measure were constantly in the face of the whole country expressing their horror of taxation—their horror of any thing like places, and yet they actually brought before the public a bill, the first object of which was a tax, and the second a job.

It is a consolation, gentlemen, that they have shewn what they would do at an early period. It has shewn us what we have to expect, if ever they should have the good fortune to get those offices which are filled at the present moment by different people—filled by men who, I am satisfied, have no interest in this but the real improvement of anatomy; the real advantages which may be derived from the study, for the benefit of mankind at large.

Gentlemen, I know it has been said among you, that the opposition that was offered on the part of this College to the bill, by the various officers whom you now see before you (many of whom have conducted it with advantage to the public and honor to themselves for many years), sought for increased power. I have taken this opportunity of stating the ground upon which they opposed the measure—I have shewn you the grounds on which they did not think taxation necessary. They opposed the measure because they would not submit to any thing that detracted from the honor of the profession—because they would not submit to any thing that would take away that influence and authority which we feel, as the Royal College of Surgeons in this country, we ought to possess. I will not detain you longer on the present occasion, because I am sure that very little more is necessary in order to convince you that, on every point that is

connected with the welfare and interests of the community at large—every thing that is dependent on this College—will be done. I am quite satisfied that for what has been done, and what will be done, you owe to those who have carried on, as I said, for years this College, with honor to themselves and with advantage to the country, a debt of gratitude which you can scarcely repay.

CHABERT AND HIS ANTIDOTES.

AN attempt has again been made by M. Chabert to lead the public to believe that he possesses some antidote, unknown to others, against the poisonous influence of prussic acid. We believe Chabert to be a clever juggler, and nothing more. Any one may recover a dog, or other animal, which is apparently dying from the effects of hydrocyanic acid, by means of ammonia, especially in the form of vapour applied to the nostrils; or still better by chlorine, with the addition of the cold affusion. All that Chabert did last Saturday has been done by others hundreds of times before: see the papers of Mr. Murray, MM. Simeon, Orfila, &c.

ANATOMY AND PHYSIOLOGY OF THE EAR.

A PAPER was lately read at the Royal Society, entitled, "On the Anatomy and Physiology of the Internal Ear, by T. W. Chevalier, Esq.;" communicated by Mr. Charles Bell.

The author denies the correctness of the commonly-received opinion, that sounds are modulated in their passage through the tympanum of the ear; and believes that the vibrations are transmitted without modification to a medullary substance, which he thinks may be regarded as a process of the brain itself. He refers, for the proof of this proposition, to a paper of his, published in the 13th volume of the *Medico-Chirurgical Transactions*; and in which he endeavours to shew that the *malleus* and the *incus* are so closely united by ligaments as to preclude the

possibility of their moving as levers upon each other. The author lays it down as a fundamental proposition, that every sound is characterised by three properties, which are quite distinct from one another. The first of these is its degree of loudness; the second, its tone; and the third, its quality or kind. He conceives that the ear is capable of effecting a mechanical separation of these three properties; and of distributing them on different portions of the organ, without, however, destroying their physical unity: and he claims to himself the originality of the discovery of the several portions of the nerve of hearing on which these different properties of sound are respectively impressed. That part of the organ which is adapted to distinguish the loudness of sound, he terms the *biameter*; that which conveys the perception of differences in tone, he calls the *tonometer*: and thirdly, to that portion of the internal ear which is impressed by differences in the quality of sound, he applies the denomination of *poiometer*. He regards the cochlea as performing the function of *biameter*, viewing it as being essentially a conoidal tube, which is coiled into a spiral form merely for the sake of greater compactness and strength; for he observes, that in the ears of singing birds, where compactness is no object, the cochlea is a straight tube. In order to explain his view of the office of this part of the ear, he assumes it as a principle, that where a liquid is propelled through a conoidal tube, its pressure against the sides is inversely as the square of the area of a transverse section of the tube. This pressure, in the case of the *scalæ* of the cochlea, will be greatest at their apices. Hence the impression of sound will be greatest at this part, and will diminish in regular gradation according as we trace the tubes from this part to their wider extremities;—so that the louder the sound, the greater is the extent of the *scala cochleæ* throughout which it is felt; an effect which will be still further augmented by the greater vascularity of the membrane of the *scala* as it approaches the cupola. The author conceives that the internal ear is protected from the injurious impression of very loud sounds by the action of the *stapedius* muscle, which totally intercepts their transmission by the ossicula to the membrane of the *fenestra rotunda*, and which is impressed upon a particular

branch of the auditory nerve distributed upon that membrane. This view of the subject, he thinks, is corroborated by comparative anatomy; the base of the scala tympani being particularly developed in animals easily awakened by noises, as the cat, hare, and stag. The author ascribes to the mastoid cells more particularly the power of transmitting sounds through the bones of the head, and denies that any sonorous vibrations can take place in close cavities filled with elastic fluid.

The function of the auditory *tonometer* he assigns to certain medullary expansions, which he conceives he has discovered at the ampullular extremities of each of the semicircular canals. He is led to the belief that the fluid in these canals is capable of a species of circulation, in consequence of the impulses received from the vibrations of the membrane of the *fenestra ovalis*, which is itself set in motion by the chain of ossicula. This he infers from the circumstance, that the common orifices of superior and posterior canals, and that of the exterior canals, are immediately opposite to the *fenestra ovalis* in the cavity of the vestibule, while their remote extremities are at the greatest possible distance from the direction of the original impulses given by the stapes. The perceptions of tone conveyed by the

three semicircular canals in each ear, coalesce in the mind into one perception; nevertheless there is an advantage in this triple organ, inasmuch as it may possibly be the means of our receiving perfect impressions from different sounds, whether they be concords or discords; and hence enabling us to perceive these qualities, for the perception of which the author does not see how a single organ could suffice. The writer, considering that, besides loudness and tone, sounds are also capable of being distinguished by some other qualities, thinks that these differences of quality may arise from different laws of vibration. He imagines a monochord, for example, may, when vibrating so as to occasion sound, perform its vibrations in very different modes of acceleration or retardation of its velocity, and impress these different modes of vibration on the air and other media by which the sound is transmitted to the ear. The organ for the perception of these differences he conceives to be a part of the vestibulum, which he styles the *poioneter*, and where he has discovered a cushion of medullary matter, over which the lining membrane of the vestibule is loosely extended, so as to be unsupported and depressed at its centre*.

* See Lit. Gazette.

MR. LAWRENCE'S LECTURES.

THE publication of these lectures in the Gazette has obviously been a cause of great dismay in the neighbourhood of Bedford-Square; numerous circumstances having conspired to render this measure particularly disagreeable to our contemporary, who has every week had many proofs how unpleasant a thing it is to have a successful opponent. After persevering for some months in the struggle, he has at length tacitly acknowledged his inability to contend with us on equal terms, and has had recourse to a little trickery in hopes of recovering his lost ground. He has stolen a march upon us by publishing three lectures in each number, and practised a *ruse* upon his readers by raising the price of his journal one third. The avowed purpose of this novel arrangement is the anxious and most disinterested

concern of the Editor for the convenience and welfare of the public, as he will thus be able to bring all the said lectures within the compass of two volumes, whereas in the Gazette they will probably extend through three. Those who remember the shifts adopted to spin out Dr. Blundell's Lectures, so as to make them last for two complete years, will smile at the gravity with which this ridiculous motive is assigned for the adoption of a measure which, we hesitate not to assert, but for the increasing success of this Journal, never would have been dreamed of. The Lancet will certainly be thus enabled to bring Mr. Lawrence's Lectures to a close some time before us; perhaps, however, our readers will agree with us in thinking that priority may be purchased at somewhat too high a price

when they cast their eyes over the extraordinary specimens of reporting which we subjoin.

We have compared our lecture of last week (XXIII.) with the corresponding

one—of three so hurriedly put forth in the *Lancet*, and have selected a few passages which illustrate pretty clearly the *advantages* resulting from anticipation:—

EXTRACTS FROM LANCET AND GAZETTE.

New Theory as to the Origin of Syphilis.

Lancet.

"Now that period was distinguished by two remarkable events; the first was the discovery of what was called the New World by Columbus, *who afterwards returned to the West Indies*;"—

• • • • •

"Many have believed that *syphilis* was thus originally introduced into the *West Indies* from the first island which was discovered by Columbus;"—

That Syphilis being called the French and not the Italian Disease, is a proof that it did not come from the West Indies.

Lancet.

"At all events, we find the disease existed at the time I have already alluded to. It appears, then, to have broken out in France and *Italy*, and not in Spain, and the name by which it was known points out very clearly the disease. By whichever of these names it was known, certain it is, that nobody ever thought of calling it the Spanish disease, or the *Italian* disease."

Gazette.

"Now about that period two remarkable events took place. The first of these was the discovery of what was called the new world by Columbus; who returned from the island of Saint Domingo to Spain in 1493, after discovering the islands of the *West Indies*;"—

• • • • •

"Many have believed that *syphilis* was a disease originally epidemic in the *West Indies*, in the part that was first discovered by Columbus;"—

Gazette.

"If we consider that the venereal disease first originated at the time alluded to, it appears that it had broken out in Italy or France, not in Spain; and the name by which the disease was known in the first instance, points out this circumstance clearly. But, at all events, it was known by one or other of these names—nobody thought of calling it the Spanish, or the Haytian disease—they gave it no name that denoted its origin to have been either in Spain or in the *West Indies*."

Queen Johanna's Brothel, and the weekly duty she imposed on her Consuls.

Lancet.

"She points out the place where this establishment is to be, and in that respect, there is something in it singular, because she directs that it should be placed near to the convent of the Augustine Friars, a kind of establishment that, I suppose, she thought would be equally convenient to the persons inhabiting both (much laughter). She directs that there should be a consul appointed, and that every Saturday that consul should examine all the girls in the town, and if he found that any of them had contracted any illness by whoring, they should be set apart."

[The consul to examine all the girls in the town of Avenio every Saturday!—Prodigious!]

That the Recognition of Diseases, and their being mentioned by various Writers, is no proof of their non-existence.

Lancet.

"The small-pox, the measles, and the scarlet fever, were recognised for centuries; between the measles and scarlet fever the distinction was not made, till since the middle of the last century. That the mere si-

Gazette.

"She then points out in what part of the town it should be situated, and what is singular she directed that it should be placed near the convent of the Augustine friars—a situation that she perhaps thought would be convenient for the inmates of both establishments. But the important regulation is the fourth: she there directs that every Saturday a barber*, deputed by the consul of the town, should examine all the girls in the establishment, and if it was found that any of them had contracted illness "by fornication," that they should be set apart from the rest."

* i. e. a Surgeon.—E. G.

Gazette.

"The small-pox, measles, and scarlet fever, were confounded together for centuries, and no distinction was made between these three affections till a comparatively recent time; indeed between the measles and scar-

lence, therefore, of some persons who have written on parts of it, does not prove that the disease did not exist, must I think, be indisputable."

let fever, no distinction was made till about the middle of the last century. That the mere silence of persons who have written on a subject, respecting some parts of its history, does not prove that what they omitted to notice did not exist, we have clear evidence from other considerations."

Uniformity of the Plurality of distinct Poisons.

Lancet.

"The next question is, whether there is one kind of poison, or whether there are more venereal poisons than one? Now, inasmuch as the real nature of the poison, that is, the real source of the symptoms, is so far unknown to us as I have just explained to you, this question resolves itself into another, which is, whether, among the various symptoms we recognise as syphilitic, there are such differences; and whether those differences are constantly observed in such states as to induce us to refer them to different sources?"

"Now, in investigating this matter of the uniformity of the plurality of distinct poisons, we come to a difficulty at the very onset, and then we find that our knowledge is extremely imperfect. We do not know, in the first instance, whether one particular sore propagates its kind or not."

Serious Nature of Syphilis, its obvious Relapses, and the contentions regarding it.

Lancet.

"In this point of view, the nature of syphilis is sufficiently *serious*, although not so *serious* as was formerly supposed. It is only in a very few instances that such *obvious* relapses take place, and the instances are extremely few indeed, in which the disease proves fatal in this way."

"Hence surgeons at all periods, since the disease has been well known, *kept up a contention* with respect to the discovery of other means by which the disease might be more effectually controlled."

These are all taken from one lecture, but by no means all we might have taken from it, as any one may satisfy himself by reading either the first sentence or the concluding paragraph, containing an account of Dr. Thomson's opinions and practice. We have also

Gazette.

"The next point of inquiry is, whether there be one kind of poison only, or more venereal poisons than one? Now inasmuch as the real nature of the poison—that is, the real source of the symptoms, is so far unknown to us—this question resolves itself into another: whether, among the various symptoms that we recognize as syphilis, there are such differences, and observed under such circumstances, as to induce us to refer them to different sources?"

"Now, in investigating this point, about the unity or plurality of syphilitic poisons, if we come to propose a test, we find our knowledge of the subject to be extremely imperfect. We do not know, for instance, whether each particular sore propagates its like or not."

Gazette.

"In this point of view, therefore, the nature of syphilis, although not so essentially destructive as it was before imagined to be, is sufficiently serious. It is only in a few that such frequent recurrences—such obstinate relapses—take place; and the instances are few indeed in which it proves fatal in this way."

"Hence surgeons at all periods since the disease has been well known, have turned their attention to the discovery of some other means by which the symptoms might be more effectually controlled."

read the lecture in the *Lancet* corresponding to the one we have given this week, and find that similar specimens might be extracted, but we have neither time nor space to devote to the task.—
"Ab uno disce omnes."

EXTRACTS FROM JOURNALS,
Foreign and Domestic.

DROPSY OF THE OVARIUM CURED BY
OPERATION.

A WIDOW, aged 27, of scrofulous con-

stitution, but who had never suffered from ill health, exposed herself to cold while in a state of perspiration, and was affected in consequence with strangury, followed by fever. Shortly after, a tumor began to develop itself in the right hypochondriac region: it was mobile,

indolent, and in the course of two years acquired such a size that the patient appeared to be in the seventh month of pregnancy. The menstruation and other functions remained undisturbed. Professor Galewzowski regarded it as a scirrhous degeneration of the ovary, probably complicated with dropsy. An operation being determined on, it was practised in the following manner:—An incision, five inches long, was made in the linea alba, commencing above the umbilicus; part of the intestines and the epiploon immediately escaped at the wound, and the right ovary was then found: the surface was white, hard, unequal, granular, and covered with a fibro-cartilaginous membrane. The tumor being completely adherent posteriorly, its entire extirpation was not attempted, but M. G. contented himself with cutting into the tumor, which proved to consist of cells, and thus allowing about three pounds of thick yellow fluid to escape. A thread was passed through one of the sides of the cyst, and the ends brought out at the wound. The bowels were replaced, and the wound closed by means of four sutures. At the lower part of the incision some charpie dipped in oil was introduced, passing it into the interior of the cyst: by this several pounds of fluid afterwards oozed out, and at three different times considerable portions of the cyst were also evacuated. Antiphlogistic treatment was adopted in the first instance, and this followed by tonics. At the end of seventy days the patient was discharged, having only a small fistulous opening left, by which some pus continued to flow.—*Graefe u. Walther's Journal*.

ANIMAL CHARCOAL IN GLANDULAR ENLARGEMENTS.

Animal charcoal is prepared by taking two parts of the muscular fibre of beef or mutton, deprived of all fat, and one part of bone: these are to be reduced to small pieces, and subjected to roasting in the manner adopted with regard to coffee. This torrefaction is continued over a moderate fire, till a little flame is seen around the machine, and at the end of a quarter of an hour from the appearance of this, the process is to be discontinued: if it be persevered in till the flame is extinguished, all the medical properties of the charcoal are dissipated. After it is

cool, the mass is reduced to powder, and kept for use. This preparation has been strongly recommended by Dr. Weise, and his observations are confirmed by those of Dr. Gumpert and Dr. Wagner. It is used in the following manner:—Six parts of the charcoal are mixed with one of sugar, and of this a portion as large as a pea is taken night and morning. It is asserted to act powerfully on the uterus, and hence we are cautioned against giving it to pregnant women. Sometimes it causes eruptions on the face, and perspirations: when this is the case, the dose must be diminished. In those previously well, it produces painful swelling of the mammary glands and of the parotids—symptoms which are dissipated by the simple suspension of the medicine. Effects just the reverse of these are witnessed in those who have swelling of the mammary glands, for in them it causes wasting of the breast, producing the same kind of effect as iodine. The properties of the charcoal, though equally deobstruent, are more gentle than those of iodine, and do not communicate the same shock to the constitution. M. Kuhn remarks, that burnt sponge owes its efficacy not so much to the almost inappreciable quantity of iodine, as to the animal charcoal which it contains.—*La Clinique*.

SALICINA—A REMEDY IN AGUE.

Salicina is a vegetable principle, obtained from the *salix alba*, and, according to the statements of some practitioners who have tried it, equals in efficacy the sulphate of quina. It is administered in doses of from \mathfrak{ss} . to \mathfrak{ij} . twice or three times a day.—*Gazette Medicale*.

NEW REGULATIONS OF THE SOCIETY OF APOTHECARIES.

Extract from Resolutions of the Court of Assistants of the Society of Apothecaries.

RESOLVED—That the Society's Garden at Chelsea be open every Wednesday during the months of May, June, July, August, and September, from nine o'clock in the morning until twelve at noon, and that admission be given to all such medical students as are pupils to the established Professors and Lecturers in the metropolis, whether upon

medicine, chemistry, materia medica, or botany, and also to the apprentices of the several members of the Society.

That there be every week a demonstration of the plants contained in that department of the garden appropriated to plants belonging to the materia medica, and of such other plants as the demonstrator may think proper; such demonstration to commence at ten o'clock punctually; and that after such demonstration is finished, there be a lecture delivered by the Demonstrator in some part of the building attached to the garden, upon one or more of the following subjects, so as to form, during each summer season, a regular course of botanic study:—*viz.*

I. The different systems of botany, both natural and artificial, particularly those of Linnæus and Jussieu.

II. The structure and growth of plants.

III. The different parts of plants, with their descriptions and uses in the process of vegetation.

IV. The natural and chemical analysis of vegetable matter.

V. The medical uses of the most important articles in the materia medica, with observations on the best modes of preparing them. These remarks may be made either at the lectures or at the demonstrations, at the discretion of the Lecturer.

That the conducting these demonstrations and lectures be committed to the Society's Demonstrator of Botany, and that the monthly lectures hitherto delivered by him at the gardens be discontinued, as merging and more effectually provided for in the lectures now proposed to be adopted.

That in order to give encouragement to diligence and talent, there be an annual examination of such students as may think proper to become candidates for the prizes intended to be given on these occasions. The examinations to be upon some or all of the subjects stated in the foregoing series of lectures, as well as upon their skill in the nomenclature of plants. No person to be admitted a candidate who has not attended these lectures and demonstrations at least eighteen days in one summer, or thirty days in two succeeding summers; nor shall any prize be awarded unless this examination be performed to the complete satisfaction of the Examiner or Examiners for the time being.

To prevent partiality or undue preference, no public Professor or Lecturer, whose pupils are admitted to the garden, can be appointed an Examiner.

The apprentices to members of this Society having an annual opportunity of being candidates for prizes upon the ancient establishment, cannot be admitted candidates on these occasions, either during the period of their apprenticeship, or subsequently to the conclusion of it.

That two medals, the one being of gold, of ten guineas value, and the other of silver or bronze, be annually awarded to the two candidates who shall have passed the best and second best examination in manner herein-before mentioned, but no medal is to be given unless, in the opinion of the Examiner or Examiners, the candidates shall be deemed deserving of it.

The Beadle or some proper person is to attend at the garden on each day of admission, to receive the visitors, and to enter or cause their names and the names of their tutors to be entered regularly, in a book to be provided for that purpose, and also to note therein any misconduct or breach of established regulations which may come to his knowledge during such attendance, giving information thereof to the Master and Wardens.

That the following be the regulations for the admission of students:—

"It is intended that admission shall be given to all such medical students as are pupils to the established Professors and Lecturers in the metropolis, whether upon medicine, chemistry, materia medica, or botany; such students to apply at least three days prior at the Beadle's office, in Apothecaries' Hall, for tickets of admission for that purpose, which the Master and Wardens will grant to such persons as they may think proper.

"In order that the Master and Wardens may be enabled to exercise suitable discretion in granting such tickets, each student must leave with the Beadle a letter of recommendation from his tutor, stating that such student has been attentive to his studies, and is, in his opinion, desirous of improving himself in the science of medical botany.

"That a ticket be given to each student, and that such ticket be renewed annually."

By order,

EDMUND BACOT, Clerk.

Apothecaries' Hall,
Feb. 1, 1830.

SMALL-POX HOSPITAL.

We have been requested by Dr. Gregory to state, with reference to a passage in our last leading article, that the augmentation of his annual gratuity (not salary) was not owing simply to the admission of policemen; and though this may have operated on the Governors as a motive, *inter alia*, the increase is stated to be in consideration of his general services.

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LECTURES ON SURGERY,

Delivered at St. Bartholomew's Hospital,

By WILLIAM LAWRENCE, F.R.S.

LECTURE XXV.

*Treatment of Venereal Diseases continued—
Sarsaparilla—Diet—Various forms of Pri-
mary Syphilitic Sores.*

GENTLEMEN,—Other remedies besides mercury are supposed to possess anti-syphilitic properties—the power of arresting and curing the venereal disease. Perhaps the foremost among these is sarsaparilla, the root of the plant so called; and this remedy is administered in the forms of powder—of extract—of simple decoction (that is, of decoction consisting of the root of sarsaparilla only),—or of compound decoction. In the latter form, which is perhaps the most frequently employed, the sarsaparilla is combined with some other remedies, viz. guaiacum, sassafras, and mezerion. This compound decoction of sarsaparilla is nearly similar to a remedy formerly of great celebrity, under the names of Decoctum Lisi-tanicum, Lisbon diet drink, or the decoction of woods.

Now, the most opposite opinions have been entertained in the profession respecting the remedial properties of sarsaparilla. Cullen, in his *Materia Medica*, seems to doubt whether he should give this remedy a place at all in his system:—"If I were to consult my own experience alone, (says he,) I should not give this root a place in the *Materia Medica*; for I have tried it in every shape, and never found it an efficacious medicine in syphilis, or any other disease." But other persons, and those of great experience, place great confidence in the virtues of sarsaparilla, and administer it very frequently, considering it as a remedy of the greatest efficacy in various forms of syphilis and other diseases.

It appears to me, I acknowledge, that we cannot ascribe to sarsaparilla the same anti-syphilitic properties—that is, the same power of arresting or curing the venereal disease—that experience warrants us in attributing to mercury. If we take the decided forms of syphilitic disease, we do not see that the employment of sarsaparilla alone is capable of putting a stop to them, or leading to their cure. The circumstances under which sarsaparilla seems to be of use are particularly where the constitution is enfeebled, either by the long continuance and the repeated attacks of the disease in various textures of the body, or by the repeated courses of mercury that are employed (and sometimes we may say, perhaps injudiciously employed), for them:—that is, in short, where the general powers of the system are considerably enfeebled—where there is loss of flesh and loss of strength; it is in these cases that sarsaparilla is of particular efficacy, although we also give it in certain forms of the disease which are of a painful and intractable kind, and where we do not deem it fit to use mercury.

You will naturally inquire, how sarsaparilla acts? What is the mode in which it exercises an influence on the constitution that is capable of producing these beneficial effects? I must confess to you that it is very difficult to answer the question; in fact, a healthy person may take two or three pints of compound decoction of sarsaparilla, and experience no effect whatever from it; it seems to exert no sensible influence on the animal economy. We do see, however, that patients under circumstances of alarming indisposition sometimes recover, and that speedily, under the exhibition of this medicine; and therefore, although we cannot absolutely point out the manner in which the remedy operates, we are not on that account to withhold our confidence in its power. It is enough for us in medical science to know that certain effects take place. In point of fact, we are in many cases unable to distin-

guish the *modus operandi* of medicines—the manner in which their influence is produced.

It is rather singular in regard to sarsaparilla that physicians have no confidence in it, and that surgeons have a great deal; because, generally speaking, as to faith in the efficacy of the articles of our *Materia Medica*, I think that the physicians rather exceed the surgeons; however, the case is certainly reversed in respect to sarsaparilla.

Sarsaparilla is frequently given in the venereal disease in conjunction with mercury, as with blue pill, calomel, or the oxymercurate. Under such circumstances, however, we cannot be confident of the virtues of sarsaparilla, because the good we ascribe to it may possibly be accomplished by the mercury. Sarsaparilla is frequently given at the conclusion of long mercurial courses, where the patient is considerably worn out by the duration of the disease, and the unfavorable influence upon the system of the treatment that has been instituted for it. Here, perhaps, the discontinuance of the cause that kept up the disease—that is the mercury—may have as much influence in bringing the patient to a state of health, as the exhibition of the remedy in question.

Respecting a variety of other substances supposed to be anti-syphilitic; for example, guaiacum, sassafras, bark, opium, cicuta, mineral acids, &c., I need say nothing at present, because, although they were brought forward to the public with considerable confidence, as possessing powers over syphilis, general experience has shewn that they are merely capable of producing slight effects under certain states incidental to this disease, just as they may in others—but they possess no peculiar power of controlling or remedying the effects of the venereal virus. Respecting all these medicines I may refer you to a work of Mr. Pearson's—his observations on various articles of the *Materia Medica* in the cure of the venereal disease.

Now, the attention of medical men has been so much attracted by what we may call the specific character of syphilis—their minds have been so much turned to a consideration of those peculiar circumstances by which syphilis is distinguished from common disease, and they have directed their endeavours so much to the discovery of something that should counteract this specific effect (that is, to find out something that should be a "specific" remedy for the disease), that they have paid less attention than probably they ought to have done to those characters which the various forms of syphilis possess in common with other diseases.

Suppose we put out of the question altogether the notion of the peculiar nature and properties of the venereal poison, and of the disease which it produces, what do we see in the various symptoms that are de-

scribed as constituting syphilis? We find inflammation of various textures of the body, suppuration, ulcerations of various characters, mortification, interstitial depositions producing enlargement of various parts, feverish disturbance, great suffering, emaciation, and a cachectic state of the system. If we regarded these circumstances without turning our minds at all to the specific, or peculiar nature of the cause that produces them, we should immediately say, that in the early stages of this disease—during the inflammatory symptoms, the application of antiphlogistic treatment—even general blood-letting, would be proper; we should employ those means which we consider to be capable of promoting absorption, in cases of interstitial deposition; where there is great suffering we should use soothing means; and in the last stages of such affections, where the powers of the constitution are reduced—where there is a loss of flesh and a hectic state comes on, we should use such means as are calculated to restore the general strength. These are the means we should adopt, if we regarded the symptoms of syphilis without any reference to their peculiar and specific character; and I have no hesitation in stating, that such means may be employed with as much reliance on their efficacy in syphilitic disease, as in similar affections of the system from any other cause.

Now, reduced diet is necessary for the inflammatory period of syphilitic disease.—Persons must abstain from fermented liquors and solid animal food; they must take a mild and simple diet. This is a point to be particularly attended to in the treatment of the venereal disease. In some parts of the Continent, as in Germany, one plan they pursue, as an essential part of the treatment, is what they call *hunger-cure*—that is, hunger cure—cure by starvation—the employment of a very reduced diet. An account has been published of the treatment of cases in the Venereal Hospital at Paris, in which the efficacy of the vegetable or reduced diet is strikingly seen as contrasted with the employment of stimulating or animal regimen. A number of cases, including both primary and secondary symptoms, were treated at the *Val de Grace* from April 1825 to July 1827. Some took mercury, and some did not. In some of these animal diet was employed, while others were confined to a mild vegetable diet—*regime vegetal et adoucissant*. Putting other treatment out of the question, the average duration of the cases which were on meat diet was fifty-five days, the average duration of those on vegetable diet was only thirty-three days; so that you observe the difference between the employment of a mild vegetable diet, and a stimulating animal diet, without reference to other points in the treatment, made a dif-

ference, in the general duration of the cases, (whether they were primary or secondary), of twenty-two days: those on animal diet occupied, on the average, fifty-five days, those on vegetable diet only thirty-three days.

Primary Syphilitic Sores.

I proceed now to speak to you of *primary syphilitic sores*, or *chancres*, as they are called. The word *chancre* denotes the acrid, eating, or ulcerative character of these sores. The term is rather equivocal, and therefore it is best to employ it as little as we can. The expression, *primary sore*, would answer the purpose of the word *chancre*, because *chancre* is supposed to be a syphilitic sore—one possessing properties dependent on venereal virus; and as among the ulcers incidental to the generative organs, there are several that do not possess this property, and as we cannot, in the majority of cases, know whether such poison be present or not, it is better to employ the equivocal term *chancre* as little as we can.

Primary sores appear chiefly on the external organs of generation of the two sexes, most commonly on those parts which are covered by a thin, delicate integument, such as the glans penis and the lining of the prepuce, in the male subject, and the various parts included by the labia pudendi, which are covered by a thin skin, in the female.—These are the most frequent situations of primary syphilitic ulcers; which sores, however, may come, and are not uncommon, on those parts of the external organs of generation which are covered by common cuticle; that is, the external surface of the prepuce, the penis, on the anterior part of the scrotum, or the external surface of the labia pudendi and the perineum of the female. They may also come on the surface of the mucous membrane, but much less frequently;—syphilitic sores do sometimes shew themselves upon the orificium urethræ of the male, and within the vagina of the female, but they are uncommon in both these situations. They are generally produced by the application of a poisonous or infectious secretion to the unbroken surface of the part; but they may likewise be produced by the application of such secretion to the surface of a recent wound, or of an open ulcer. In the latter way they are occasionally produced on the fingers and on the nipples. With respect to the latter, I am not exactly certain whether it is necessary that there should be an actual excoriation or breach of surface, in order to produce the syphilitic affection. We know that it takes place when a healthy woman suckles a venereal child. But in cases of the reception of venereal poison by the fingers, we only see that it takes place where there has been some external wound or breach of the

surface previously: at least, I know of no cases in my own experience where primary venereal sore has taken place on the finger or hand, when the cuticle has remained unbroken; while within no long time I have had occasion to see four cases where venereal poison has been received through wounds on these parts.

A gentleman called on me one day, saying that he had a very painful affection of the hand and arm, which had arisen from a gnat-bite. He uncovered them, and I found a violent inflammation affecting the skin of the wrist, the fore-arm, and extending up the arm. He then shewed me his thumb, where I saw a nasty, foul sore, about the size of a shilling, with considerable swelling and redness of the part generally. I asked him how this had happened? He said that it was a gnat-bite—that he had neglected it—that it had festered, got worse and worse, and then his arm had inflamed as I saw it. I looked at it attentively; and it appeared to me to be a more serious effect than a gnat-bite would produce. I told him that I never saw a gnat-bite produce such an effect, and that I thought something else must have been the cause. He was a person that I knew was a free liver, and that was in the habit of drinking, and therefore I thought it not unlikely that he would suffer as much from a gnat-bite as a person could suffer from such an injury; yet this case went beyond what I ever saw produced by such a cause. There was a foul sore upon the thumb, as large as a shilling, and high inflammation, assuming pretty much the character of phlegmonous erysipelas, up the inside of the fore-arm and arm. He then said that something else had happened, but he did not think that could have done it,—that on such a day he had been dining with a friend in the city, and drank rather freely: that on returning home along the Strand, he had got into conversation with a damsel; and, in fact, that he had been silly enough to put his hands up her petticoats; but he really had done nothing else with her. When he got home, he said that he found his hand had a very bad smell, and he immediately took means for cleaning it by washing; but he found a good deal of difficulty in getting the smell removed. From that time his thumb, which he was conscious had had something the matter with it, from a gnat-bite or something else, got worse and worse; and, in fact, it was apparent that he had applied syphilitic poison, and that the state of the sore was the result of such application. The first thing that was to be done in this case was to reduce the inflammation, which was very severe. Accordingly I ordered a number of leeches to be applied, and other suitable measures to be adopted. I did not see him again for a few days; however, he had the leeches applied, and got

rid of the inflammation of the arm and fore-arm, but the state of the thumb was little, indeed not at all, mended. I now directed the employment of the black wash, and that he should take five grains of blue pill three times a day. He went on with this a few days, but it produced no effect on the system, and the sore of the thumb was no better—rather worse. I then deemed it necessary to employ mercury in an active way, and gave him calomel and opium largely, under which he got salivated; and then the local symptoms were soon arrested, the sore put on a healthy character, and proceeded rapidly towards healing. However, he was not regularly under my care, and he left off the mercury before the cicatrization was complete; the consequence was, that the sore spread again, and he was obliged to go through a second mercurial course before the complaint could be put a stop to; after which it was finally cured.

Not long ago a surgeon wrote to me from the country, mentioning that he had got a painful sore on the finger or thumb, I forget which; that he had delivered a poor woman who had gone accidentally through the town in which he lived, and finding that a sore place which he had had on the thumb or finger previously, (and which was produced by a scratch), was now excessively painful, he was induced to examine the patient, and found that she had got venereal sores. The sore and the inflammation of the parts had increased rapidly, and spread into a nasty foul ulcer. He wrote to consult me about it, stating these circumstances, and begging to know what I thought of the case. I returned for answer, that he had got a venereal affection, and that I recommended him to use mercury actively. In a few days he came to town, and I had an opportunity of seeing him; he looked pale, sallow, and ill. He shewed me his thumb, which was of a bright red color, and there was a large foul sore on it, which was excessively painful. He said that he had suffered much on his journey to town: that he had begun to take mercury as soon as I wrote, but it had not acted on the system; he thought, however, that the progress of the sore had been checked by it, but he had suffered in coming to town by another cause—he had had an attack of the piles, which came on just before he left the country, and had been very painful in the coach during his journey. I asked him if he had had piles before, and he said, No, he never had. I thought it strange that he should have an attack of the piles just at that time; but he said he was sure of the fact, because he had shewed them to a surgeon, who had put caustic upon them, and which had made them much more painful. I examined the parts, and I found he had got venereal ulcers about the anus; in fact, a second set of

sores, from the primary ulcer on the hand. As soon as he arrived in town I made him confine himself to the house, and put him on an active mercurial course; it took effect rapidly, and as soon as the system was affected, the sores were immediately checked both on the thumb and anus, and by perseverance in this treatment, in two or three weeks he got well, and went back to the country. I have heard nothing of him since that time, and therefore presume that he has continued well.

I saw another gentleman who had attended a low woman in her confinement. He had a sore upon the finger, which became infected; it put on a thick margin, and had an unhealthy secretion: in a short time he had a swelling of the glands in the axilla, and a scaly eruption about the body. These got well when the system was thoroughly affected with mercury.

You see therefore that the pox may be got in other quarters as well as the sexual organs, and it is of great consequence for those who have to practice on patients laboring under syphilitic disease, and who have to handle the organs of generation in females so affected, to take great care that they do not allow any of the discharge to come in contact with recent wounds or ulcers.

I may mention that Delpech, who has written some observations on the treatment of the venereal disease, mentions the case of a surgeon who contracted the complaint on the finger, from handling an ulcerated fissure about the anus of a patient. Swelling of the glands, eruptions over the body, disease of the nose, and other bones, came on, and he says, the patient did not recover till after six years' suffering and treatment.

The venereal poison does not produce its effect immediately: some interval of time takes place between its application and the appearance of the symptoms which it produces; as in the small-pox, cow-pox, hydrophobia, &c. Syphilitic ulcers seldom appear in less than five or six days, or a week, after connexion. I have known the interval between connexion and the appearance of the symptoms to be as much as four or five weeks. Mr. Hunter says that he has known syphilitic ulceration to commence in twenty-four hours after connexion, and he has known it delayed seven weeks—indeed he mentions one instance in which two months intervened. Where the poison is applied to a broken surface, as in the cases I have now mentioned, the symptoms came on more rapidly; for in these different instances, the very painful state of the wounds which existed in these individuals was perceived within a few hours after the application of the venereal poison to them, and within 24 hours a decided affection of a syphilitic nature had taken place.

The syphilitic sore shews itself first in

the form of a pimple, or minute vesicle, or pustule. This spreads by an ulcerative process; generally speaking, however, the ulceration in syphilitic cases is not very rapid, it is rather of a chronic kind, though, in this respect, there is a considerable difference in different kinds of sores. The syphilitic sore is generally of a circular figure, but not necessarily so. The sores which are produced by the application of venereal poison to the external organs of generation, are various in their appearance; we cannot describe one particular form as characteristic of the poison. We find that there are several, all of which seem to be equally produced by the same cause, but yet differ materially from each other in their characters.

In the first place, there is the *simple venereal sore*, which has been called by Mr. Evans, whose work on syphilis I can recommend to you, "*venerea vulgaris*"—common venereal sore. This is a superficial ulcer, taking place very commonly on the internal surface of the prepuce. Usually there are more than one; two, three, four, or more such sores may form. In the first place there is a degree of excavation from ulcerative absorption;—after a certain time the excavation thus produced is filled up, so that the sore is then on a level with the rest of the surface; the reproductive process continuing sometimes causes an elevation of the sore, so that it protrudes above the level of the surrounding skin, and afterwards this is followed by cicatrization. These are the stages the sore goes through; and it often occupies four, five, six, or seven weeks in doing so. It is a common circumstance for the surface of the sore to bleed when the dressing is changed or it is exposed. Venereal sores frequently take place on the frænum; indeed there is a kind of fold between the prepuce and glans in which matter may easily lodge, so that this is a frequent seat of ulceration. When it takes place there it commonly penetrates through the frænum, so as to destroy it, the ulcerative process extending quite through the fold of the integument. Sometimes, in persons who have naturally a contracted prepuce, there are fissures towards the apex, something like chaps, that may become the seat of ulceration. These altogether may be considered as ordinary or common syphilitic ulcers; and they are perhaps the most frequent form of the affection.

There is also a venereal sore in which the margin of the ulcer is elevated, and a little indurated. This kind of syphilitic sore often forms just at the junction of the prepuce with the corona glandis; but more frequently still it is seen on the external surface of the prepuce. There is a redness around the margin of the ulcer; the surface of the sore itself has something of a peculiar cha-

racter; and the discharge from it, when it takes place on the external surface of the penis, is scanty in quantity, and encrusts, so as to form a thin scab.

There is the *indurated chancere*—that is, a venereal ulceration taking place on an indurated base, so that the margin of the sore, and the base on which it is formed, present an unnatural hardness. Mr. Hunter, in his account of chancres, or primary venereal sores, says that the base is generally hardened; and hence, in consequence of the description he has given, many surgeons have entertained the idea that a hardened base and edge are essential to the character of a true syphilitic sore. Now if we take all the primary sores that we see, we find that a great portion do not possess this character of the hardened base or edge; they are not indurated sores; that character is only exhibited in a certain proportion of primary ulcers. Yet in consequence of Mr. Hunter having given this description, some have considered that a true syphilitic sore must have this hardened base and edge, and that those that do not possess this character are not true venereal ulcers. They have even gone farther than this, for seeing not only that a great variety of primary sores do not possess this character of induration, and seeing that the progress of syphilitic disease in other points deviates considerably from what Mr. Hunter has laid down, they have drawn the inference that the character of the disease itself has changed since Mr. Hunter's time; that syphilis now is a different kind of disease in many essential points from what it was when Mr. Hunter wrote. I cannot for my own part adopt this conclusion; I think it more likely that Mr. Hunter should have been mistaken or inaccurate than that the nature of the disease should have changed. If we look back to the description of disease, of whatever character, as given in the most ancient times, we find that all these descriptions apply very accurately to disease as it exists now; and we have no reason to say that nature has changed in any essential points in this disease more than in any other. In reference to this point I cannot help calling to mind the short and pithy remark of a great writer of antiquity—" *Opinionum commenta delet dies, naturæ judicia confirmat*;"—that is, "Time destroys the fictions of opinion, but confirms the decrees of nature." Now when I read over what Mr. Hunter has said about the venereal disease; when I see the fanciful speculations and ridiculous opinions that are put forth on the subject, I cannot give to his observations the character of authority; I cannot consider that they are really "*naturæ judicia*," but that they must rather be classed as "*opinionum commenta*."

The induration which accompanies vene-

real sores is seen under different aspects. In the first place there may be small and moderate induration, or there may be a considerable mass of hardness, presenting a cartilaginous character; so that when you feel the part between the finger and thumb, it seems as if you were feeling a bit of cartilage, and the ulceration is seated upon the indurated part. Sometimes this kind of cartilaginous induration remains after the healing of the ulceration, and sometimes such an induration will take place at a remote period after the occurrence of the primary symptoms; it will come on as a kind of secondary appearance. I visited a gentleman who had had before I saw him two or three small sores that healed under a moderate use of mercury in three weeks. He took it partly from his own prescription, but, however, the sores healed in about the time I have mentioned. In three weeks more, without any fresh infection, an ulcer took place, with induration at the base of the prepuce; the indurated part was as large as a horse-bean—the ulcer about the size of a pea. I directed for him five grains of blue pill at night, and then the application of mercurial ointment. The sore healed in a fortnight, while the induration became reduced one-third in a month, and disappeared in another month altogether. This happened three years ago, and the patient has continued well since.

I remember the case of a medical man who had obstinate venereal sores, which, however, at length healed; and after that he married. Well, nearly a year afterwards a large lump, of bright red color, formed on the prepuce, and he had scaly eruptions on the head. It was a case of secondary syphilis, and the symptoms were permanently cured by mercury. It is not uncommon to see indurations of that kind come on at rather a late period after the occurrence of the primary symptoms.

The next kind of ulceration I have to notice is, *phagedenic primary sore*: a primary sore presenting those characters which I have had occasion to mention as belonging to phagedenic ulceration—that is, the removal of the part by ulcerative absorption. The part has a sharp edge, while the surface is rather irregular and ragged; there is an eating away, as the name implies, of the textures of the part; there is no formation of granulations, nothing like an attempt at the reproductive process, and there is a thin ichorous, and generally very offensive discharge. Sometimes you see this phagedenic form of ulceration proceeding over the prepuce and glans, and gradually destroying those parts, but proceeding very slowly. At other times it goes on much more rapidly; the sore has a livid appearance, and without the occurrence of sloughing, but simply by ulcerative absorp-

tion, it rapidly destroys the part in which it is situated. There is thus a kind of acute rapid phagedena, and a more chronic or slow kind of phagedenic ulceration.

The fifth kind of sore is *sloughing or gangrenous ulcer*, where there is a loss of vitality; the surface of the sore assuming a dark, black, and sloughing appearance, with high inflammation of the surrounding parts. In these cases there is considerable redness, swelling, and pain. There is a loss of vitality in the ulcerated surface; the portion that has sloughed is separated, and then a fresh slough forms; thus the part becomes destroyed very rapidly, and the sore spreads in all directions, the parts which it affects being destroyed by that kind of process which I have already described to you as constituting sloughing phagedena; where a gangrenous substance forms on the surface of the sore, and where the ulcerative process extends under it, causing very rapid destruction. Considerable inflammation attends the progress of this sore, affecting all the surrounding parts. Thus when the sore is seated on the glans, or internal surface of the prepuce, phymosis takes place, the prepuce becomes inflamed and swelled, so that it cannot be drawn back; and then the progress of the sore is hidden from our view; yet you have great tumefaction, a bright red and smooth appearance of the prepuce, a copious flow from the contracted orifice of either a sanious or an ichorous—at all events, an extremely offensive discharge. This sloughing chancre is found under two different circumstances. We very commonly see it as the result of neglect and intemperance, in the cases of sores that may not have been of a sloughing character originally, as where persons having primary syphilitic sores take none of the precautions which they ought to employ in the commencement, but continue their usual occupations and intemperate habits, and thus superinduce, by every kind of external and internal irritation, a high degree of inflammation upon a complaint which in itself is of an inflammatory character. The sloughing seems to be a superinduced state in these instances; but in others, the sloughing character is observed from the very commencement. A high degree of constitutional disturbance attends this form of chancre; there is a full and hard pulse, more particularly where it occurs in young and robust persons; headache, white tongue, and in fact the general circumstances that characterize high inflammatory fever.

These are the principal varieties which we observe in the appearance and character of primary venereal sores. I do not know that this enumeration includes all the forms of ulceration that may be observed; in fact, there are intermediate degrees be-

tween these several kinds—and all we can do, in a general description, is to give you an outline of the circumstances; we cannot, perhaps, embrace in our account the minuter features of each particular gradation.

It is important to form a distinction between syphilitic sores and other ulcers, or affections, which are incidental to the same parts. If an ulcer take place on the external organs of generation of a healthy person, a few days after having had connexion of a suspicious character, we can have very little hesitation in ascribing the disease which is then produced to the application of venereal poison;—in ninety-nine cases out of a hundred, or a greater proportion, the disease will unquestionably be venereal. Persons are constantly pestering us with asking whether this or that sore is venereal or not; I am much in the habit of telling them that it comes from whoring, and that if they had not been doing anything they ought not to do, they would not have had these sores. As for the distinctions of syphilis and non-syphilis—true syphilis and bastard syphilis—these I entirely discard. All sores that originate in a healthy person from sexual intercourse, are with me venereal sores, and I have mentioned to you the various characters they assume under different circumstances. I regard any one of these characters to be as much true syphilis as any other; I do not know that the character of true syphilis belongs to one kind more than to another.

Now the prepuce, both on the external and internal surface, is liable to an attack of inflammation, with the formation of minute lymphatic vesicles, which constitutes what nosologists call *hæspes præputialis*. A portion of the skin inflames; a little cluster of serous vesicles forms on it; they become purulent, are discharged, and dry up;—a succession of these may form, but they are so decided in their character that they can hardly be confounded with the venereal disease.

Then the surface of a part of the external organs of generation may be hurt—they may be lacerated or excoriated at the time of connexion. This is a circumstance that takes place during commerce, and is known immediately after it; and therefore you may distinguish any thing of this kind that occurs in consequence of coition, from those affections that do not take place for some days afterwards. There is a secretion naturally of these parts, which, in persons who neglect cleanliness, may be the source of superficial ulceration. The prepuce, in the male, is sometimes liable to a kind of inflammation, with the formation of a scaly surface, like what is called *psoriasis* in other parts of the body. There may be a kind of redness, with a scaly state, and fissures or cracks of the prepuce; but this can hardly be mistaken for a venereal affection.

Treatment of Syphilitic Sores—Sloughing, and Phagedenic Ulceration.

In the treatment of venereal sores, the first question that occurs is, whether we should attempt to remove or get rid of the venereal poison at the very commencement, by any process at all similar to that which is employed in some other animal poisons—for instance, in hydrophobia? Now excision of the part, or its destruction by caustic, has been recommended for this purpose. I believe excision of the infected part is little practised in the venereal disease; but sometimes, on the first appearance of the sores, we apply lunar caustic to the surface, and this succeeds in preventing the farther progress of the disease.

With respect to the treatment of *sloughing* venereal sores, when you come to consider the active state of inflammation of the part, and that it loses its vitality in consequence of this—when you consider the general symptoms that I have mentioned, the fulness of the pulse, and the other indications of a feverish state of the constitution, you can have no hesitation in affirming that the employment of antiphlogistic treatment of the most active kind is necessary. This is not a case for the exhibition of mercury; the employment of mercury not only does no good in such an affection, but aggravates the mischief, accelerates the gangrenous process, increases the extent of the destruction, and adds to all the symptoms. You must therefore take blood from the arm; perhaps, take blood locally also; put the patient on low diet, and then administer sulphate of magnesia and tartrate of antimony; in fact, employ the means most calculated to reduce arterial action. Locally, you adopt soothing means; you apply tepid fomentations and soft warm poultices to the part: that is, you employ all those means, local and general, that are calculated to reduce excessive action. In this way you treat cases of sloughing chancre with the greatest efficacy.

I mentioned to you that in these cases you commonly find high inflammation of the prepuce with a contraction of the orifice, or *phimosis*, and this state of the parts aggravates all the mischief that would arise from the affection considered in other respects. The glans, from being the seat of the chancre, is highly inflamed, and consequently considerably swelled; it thus painfully distends the prepuce; and the prepuce also is highly inflamed, while it compresses and acts as a kind of ligature on the inflamed and sloughing glans penis. Thus the glans and prepuce mutually injure each other. The tumefaction of the inflamed glans produces stretching and inflammation of the prepuce; in fact, carries the inflammation to such an extent, that it often proceeds to mortification; while the pressure of the inflamed prepuce acts equally prejudicially upon the glans. You

find, under such circumstances, every evidence of high inflammation in the penis generally, and in the prepuce and glans more particularly, and you have a copious flow of reddish, sanious, very offensive matter, from behind the orifice of the prepuce. Under such circumstances, no doubt, the means that I have just mentioned to you will relieve the affection: the free employment of antiphlogistic means will lessen the severity of the symptoms, but this alone will not do; you must unite with it the local relief, which is effected by dividing the inflamed prepuce. You carry a director into the orifice of the prepuce, along the superior and middle surface of the glans, till you reach the point of the reflection of the prepuce; and you divide the parts by a straight cut with a sharp-pointed bistoury. By thus cutting through the whole length of the prepuce, you cause a considerable loss of blood, which benefits the local symptoms, while the glans and prepuce are both relieved from the pressure which they mutually produced on each other. This, therefore, is a very important auxiliary measure in addition to the antiphlogistic means that have already been described.

Now, some apprehension has been entertained respecting the effect of this operation, as to the probability of the divided edges of the prepuce taking on the same gangrenous or phagedenic process, which is going on in the original ulceration. The risk of this measure has been very strongly represented by some persons, and has been considered as a sufficient reason against resorting to the practice. I have divided the prepuce in a great number of instances, in cases where the worst kind of ulceration has existed, either upon the glans penis or the internal surface of the prepuce itself, and I have never in one instance seen any ill consequence result from it: I have never seen an unfavorable state of ulceration take place upon the margins of the divided prepuce; on the contrary, in instances where a sloughing or a phagedenic state has existed in the sores exposed by such division, I have very frequently seen that the margins of the divided prepuce, that is, the edges of the wound, have maintained a perfectly healthy character, and have actually healed while other and destructive processes have been going on in the original sores. But the general course of experience is, that the sloughing chancre, or phagedenic ulcer, passes into a perfectly healthy state, and that this, as well as the margins of the wound, proceeds more favorably after the parts have been liberated by the operation.

When the inflammatory symptoms have been suspended by antiphlogistic treatment in cases of sloughing chancre, we frequently find, that although the sloughing character of the sore is relieved, it still remains in a state

of phagedenic ulceration; that there is great pain in the part; and that the patient is restless, and suffers very considerably. In that state you employ opium both locally and generally: you give opium internally pretty freely; a grain of opium once in eight, six, or four hours; and you apply opium to the sore in the form of a lotion,—perhaps the best form is the liquor opii sedativus of Mr. Battley, diluted with an equal quantity of distilled water. This is to be applied on lint, and the whole covered over with a soft bread-and-water poultice. In this way the irritable and painful state which sometimes remains after the antiphlogistic treatment in such cases, is most effectually put a stop to. In the progress of such cases to recovery, you may find a form of the ulceration in which the local application of mercury might be proper, as the black wash—or in which the exhibition of sarsaparilla might be advantageous; but it is only in some rare instances that you use mercury, even locally, in cases that have once assumed a sloughing character.

There are instances in which the local and general excitement connected with sloughing chancre have subsided before we have seen the case. We may find that the prepuce or glans, or both, and perhaps one half of the penis, have sloughed before we have had an opportunity of interfering. We sometimes see the entire half of the penis already as black as one's coat. In such a case we shall find that the general febrile disturbance has subsided, that the patient is reduced, that there is a feeble and languid pulse, with a cold state of the skin and of the extremities, and those general symptoms and that state of depression which accompany mortification when it has affected any considerable part of the body. Here the employment of antiphlogistic means, or lowering treatment, would be out of the question; stimuli, tonics, cordials, must be employed: here opium, bark, and port wine, perhaps even brandy, are proper. The local applications and means must be of the same character, such as the balsam of copaiba, and the various other remedies of which I had occasion to speak to you in describing generally phagedenic and sloughing ulceration.

I have only a few words to say respecting the treatment of phagedena. This, like sloughing chancre, does not bear the general administration of mercury. You may employ mercury locally—you may apply the black wash to the part. Narcotics are had recourse to for the relief of the pain which accompanies this form of the disease;—sarsaparilla is given internally, and such occasional means as the particular symptoms may require. This constitutes the treatment of phagedenic chancre. You will very often find that the ulcerative

process will take its course, so as to destroy the glans and the prepuce, or both, without your being able to arrest it. You will not do any good by the administration of mercury—under such circumstances, most probably, you would but aggravate the mischief.

Now it does sometimes happen, notwithstanding that when a certain kind of active phagedenic ulceration is going on rapidly, and parts are being destroyed by it, you can arrest the progress of such an affection by the exhibition of mercury. When there is simply a phagedenic state of the chancre—when there is no sloughing—when there is ulcerative absorption and destruction of the parts by that process merely, without any considerable redness or swelling in the surrounding textures, and without considerable constitutional disturbance—if the destructive process is, nevertheless, going on rapidly, you may find it expedient to try, and you may perhaps succeed in stopping the progress of such a case, by the active exhibition of mercury. I acknowledge it is difficult to point out the distinction between these cases—to say precisely in words what is the kind of phagedenic ulceration in which you ought to administer mercury, and what are the particular cases in which you ought not to do so: it is a matter that can only be learned by experience; but I think it necessary to apprise you that there are such cases. I should say, that in such cases you ought in the first place to attempt to relieve the patient, and to stop the progress of the disease, by antiphlogistic treatment—as taking blood from the arm, and other analogous measures. You would endeavour to arrest the progress of the disease by such means; but suppose you did not succeed, then I think you might give mercury in a decided form—then you might administer the remedy in full doses and quickly repeated, in order to produce the effect as soon as possible; two, three, or four grains of calomel every eight, six, or four hours. If you do no good by that, then you must have recourse to the soothing treatment locally and generally that I have already described.

LECTURE XXVI.

Simple Venereal Sores, Indurated Chancres, &c. —Comparative results of Mercurial and Non-Mercurial Treatment.

I spoke to you, gentlemen, in my last lecture, of the treatment of sloughing and phagedenic primary syphilitic sores; and I now have to speak to you of the treatment that should be adopted in primary syphilitic sores of other descriptions—that is, in the simple venereal sore, in which there is no induration or elevation of the edge in the primary sore which has an elevated mar-

gin, and an indurated character—and in various other modifications which may approach more or less to either of these; and, indeed, I am speaking to you of the treatment of the greater part of primary syphilitic sores, for the sloughing and phagedenic sores are few in comparison with the others. It is in reference, then, to the sores that I am now going to speak of that the question occurs as to the use of mercury; for in sloughing sores the use of mercury is out of the question, and also in phagedenic sores generally.

Now with respect to the other descriptions of primary venereal sore, I think the points we have to consider regarding the employment of mercury may be comprised under three questions. *First*, whether the use of mercury is essential in the treatment or cure of such sores? *Secondly*, whether the employment of mercury will abridge the duration of the complaint; or, in other words, whether it will expedite the cure? *Thirdly*, whether it will prevent the occurrence of secondary symptoms—whether it will have any effect in protecting the individual from those subsequent occurrences which we call constitutional syphilis?

Now that the employment of mercury is not essential to the cure of these sores, I have already had occasion to explain to you, because I have shewn you that it has been proved by the clearest evidence that all forms of the venereal disease may get well without the use of mercury.

The next question is, whether it abridges the duration of the complaint?—and on this point the evidence is in some respects contradictory. I know that it was the opinion of Mr. Rose, whose name I have mentioned to you as having commenced in this country those important investigations that have thrown so much light on the venereal disease—who first clearly shewed that primary and other symptoms may get well without mercury—it was his opinion that, although primary sores could be cured without mercury, yet that the cure was more tedious—that it occupied a longer time. But it is the opinion of others who have tried the non-mercurial treatment extensively, that the sores treated without mercury got well, on an average, in a shorter space of time than those in which this remedy was employed. I allude particularly to some comparative trials made in the English army, and to some of those made abroad. A report was made by Sir James M'Grigor, who is Director-General of the Army Medical Board, and by Sir Wm. Franklin, also a member of the Board, that, in 1940 cases of primary venereal sores, which were treated *without* mercury, in the course of two years, the average time required for the cure was twenty-one days, when there were sores without bubo, and forty-five days in those cases in which bubo co-existed with sores.

During the same period 2827 cases of primary sores were treated *with* mercury, and they occupied, on an average, thirty-three days when without bubo, and fifty days when complicated with bubo. The comparison between the two stands thus: sores without bubo, when treated without mercury, required twenty-one days—with mercury, thirty-three days; sores with bubo, and treated without mercury, forty-five days—with mercury, fifty days; so that here you observe, in point of duration, there is a considerable advantage in the treatment of such cases without mercury. In a certain number of cases that were treated at the Val de Grace, in Paris, a similar result was obtained—that is, out of 1084 cases of primary sores, 336 were treated with mercury; and the average duration of these cases was forty-seven days, without a distinction as to whether they had bubo or not; 698 cases were treated without mercury, and the average duration of these was twenty-eight days. According to this statement, then, the result seems to be much in favor of the treatment *without* mercury, as to the length of time occupied in the cure—the cure being more expeditiously effected when the patients were treated without mercury than when they were treated with it. We do not, however, know exactly the grounds on which the choice was made in these cases—as to those that were treated without mercury and those that were treated with it. Perhaps different classes of cases were treated certain of them in the one way and certain of them in the other; so that we do not know whether this be a fair view of the result of either mode of treatment as applied to all cases—but taking the fact as it is, it is much in favor of non-mercurial treatment.

The third question, then, which is very important, is—whether the employment of mercury in the treatment of the primary affection can be considered as at all tending to prevent the occurrence of secondary disease? Now, on this point the opinion of Mr. Hunter seems to have been, that the employment of mercury would have no effect as to the subsequent occurrence of secondary symptoms. He says generally throughout his work, that mercury will cure the action of the venereal disease, but not cure the disposition to it; that is, it will cure the disease which exists at the time you employ it, but it will not prevent the occurrence of subsequent symptoms. His opinion on this point, as contained in his work, is very unsatisfactory; he does not always give the same opinion on the subject; in fact, there are obvious contradictions in various parts of the volume. I suppose he had not instituted comparative trials himself, and that the opinion he has given is rather theoretical than practical on this point. However, the returns of a great number of cases treated in the

army in the one way and in the other—cases, too, where the patients continued under the observation of the practitioners for a considerable length of time, and where there was of course an opportunity of knowing the result of the treatment—the returns of such cases lead to an opinion quite contrary to that stated by Mr. Hunter. These point to the conclusion, that the employment of mercury for the primary symptoms has a decided tendency to prevent the occurrence of secondary affections. This is entirely a question of experience, and it can only be solved by observing the effect of the one and of the other mode of treatment in a great number of cases. It is not a point that can be determined by any theoretical or *a priori* notions; but by experience alone. Mr. Rose states, that of the cases that he treated without mercury, about one in three had secondary symptoms—one-third of all the cases. Some experiments were made at the same time by treating syphilis without mercury, at the York Hospital at Chelsea; and in these instances it was stated, that the proportion of secondary symptoms was one in ten; but in subsequent and more enlarged experience in the army, it has been found that the proportion of secondary symptoms is not greater than one in twenty. In 1940 cases treated on the non-mercurial plan in the army, there were 96 instances of secondary symptoms; that is, about one in twenty where mercury was not employed, taking cases of all descriptions. In 2827 cases which were treated with mercury, there were only 51 cases of secondary symptoms; that is, one in 55; so that in the whole number of primary cases which were treated without mercury, there was an occurrence of secondary symptoms amounting to one-twentieth; while, in the whole cases treated with mercury, they only amounted to one-fifty-fifth—much less than one-half of the other. The inference from this view therefore is, that the employment of mercury for primary sores has a marked influence in preventing the occurrence of secondary symptoms.

Now, I cannot adduce any experience of my own that at all approaches in extent to that I have just detailed to you of cases treated in the army; but I should state to you decidedly, as the result of my own observation, that there are very few instances of secondary symptoms occurring, when the primary sores of the description I have above mentioned are treated with mercury. It is my plan, in private practice, to employ mercury moderately in the treatment of primary syphilitic sores generally, except in cases of sloughing and phagedenic ulcers; and in such cases I am in the habit of seeing secondary symptoms very seldom indeed; therefore my experience accords with the inference that we draw from this large experience in the army medical practice.

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Now, I cannot adduce any experience of my own that at all approaches in extent to that I have just detailed to you of cases treated in the army; but I should state to you decidedly, as the result of my own observation, that there are very few instances of secondary symptoms occurring, when the primary sores of the description I have above mentioned are treated with mercury. It is my plan, in private practice, to employ mercury moderately in the treatment of primary syphilitic sores generally, except in cases of sloughing and phagedenic ulcers; and in such cases I am in the habit of seeing secondary symptoms very seldom indeed; therefore my experience accords with the inference that we draw from this large experience in the army medical practice.

I should say, then, that in the description of sores which I have already spoken of, I should generally adopt the use of mercury in a moderate way. In the first instance, one would clear out the alimentary canal of such patients—keep them as quiet as possible—put them on reduced diet, and administer mercury to a moderate extent,—as, four or five grains of blue pill night and morning, or three times a day, and apply to the sore black wash—that is, calomel and lime-water. This treatment is generally very successful in the average cases of the description that I have spoken of.

The employment of mercury is more particularly necessary in cases of indurated chancre, and whether the sore possessed this character originally, or whether the induration has come on subsequently, or whether the induration occur in a secondary way after the ulcer is healed, and shews itself simply as an induration without sore, I think the employment of mercury is equally requisite. We cannot consider our patient safe so long as such induration remains; I therefore think it proper to use mercury in these cases, and to continue its employment till the induration is completely dispersed.

There are some instances in which sores exist on the parts under the prepuce, and cause phimosis, so that we ascertain the existence of the sore rather by the discharge that takes place from under the prepuce than by any direct evidence. After the inflammation of the prepuce has been reduced by suitable means, if the discharge continues, and if we feel induration on examining the prepuce externally, or if on touching the part we find the glans painful, we naturally infer that a syphilitic sore exists, though we cannot perceive it. In such instances I think the moderate employment of mercury is proper, and we may inject under the foreskin upon the part luke-warm water, followed by the black wash, or a mild solution of the sulphate of zinc, or the nitrate of silver.

In some instances primary syphilitic ulceration makes its way through the internal membrane of the prepuce—through the reflection of the prepuce over the glans, and then creeps on under the sheath of the integument which surrounds the penis. When this occurs, the ulceration will frequently extend under the integuments, and almost insulate the body of the penis, passing up as high as the pubes. Under such circumstances, it appears to be the best plan to slip up the part undermined by the ulceration, for we find that healthy action will not take place, nothing like consolidation will occur, if you leave it in its original state. It is necessary first to slit up the undermined part of the skin, and you then find that it will heal very rapidly.

When the absorbent glands of the groin are

affected, in consequence of primary syphilitic ulceration, they sometimes swell rapidly, become red, hot, and painful, and suppuration quickly takes place. In other instances they swell slowly; the pain is not considerable; the swelling does not become red; the parts are indurated—simply swelled and indurated. There is a kind of acute inflammation of these glands leading to suppuration, and there is a more chronic swelling of them leading to induration and tumor.

The treatment of these swellings, or as they are technically called *buboes*, (the term *bubo* is derived from the Greek word, *βουβων*, signifying groin—the word *bubo*, therefore, simply means swelling in the groin)—the treatment of these, I say, is the same, as far as the general means go, with that of the primary symptoms with which they are connected. The *bubo* participates in the effect of those general means we adopt for the primary symptoms; but the state of swelling of the glands may of itself require particular measures. If there be active inflammation in the glands of the groin, you treat it as you would active inflammation elsewhere; you apply leeches—you may apply cold lotion, or poultices, or adopt other measures, such as simple inflammation elsewhere would require. If a formation of matter takes place, it is well, perhaps, not to be very hasty in opening it, for we sometimes find that the fluid is absorbed in these cases, so that although matter may be formed in the groin, it is not generally necessary to open it: if it do not break of itself, it will be removed by the absorbents. But when the integument is thin, and there is a sensible fluctuation, it is often expedient to make an opening into the collection before you find that it will open of itself. You may either slit up the skin by a longitudinal cut, or apply caustic for its removal by sloughing, so as to destroy a portion of the thin detached integument. We generally find that the suppuration of these masses is not in the substance of the glands themselves, but in the cellular texture that surrounds them, so that when we open them, we see the glands exposed nearly as if they had been dissected. If the sore which is connected with the *bubo* requires the employment of mercury, and if the *bubo* be of the indolent and indurated kind rather than of an active inflammatory description, it will in general be advisable to employ mercury; indeed it has usually been thought that the use of this remedy in fiction is particularly applicable in such cases; that the passage of the mercury through the diseased gland has an advantageous effect in dispersing the tumefaction. Whether this be so or not is perhaps rather doubtful—but such is the opinion of Mr. Hunter, and he speaks strongly of the advantages derived in the dispersing

of buboes from the employment of mercury in this way. He says that, for a considerable part of his life, having been in the habit of using mercury in this manner, he never saw a bubo proceed to ulceration; it checked the inflammation, so as to prevent suppuration occurring. If the bubo has either been opened or ulcerated, and if the sore that has been formed is going on favorably—has an healthy aspect; and if the primary syphilitic ulcer should have healed, it is not necessary to persist in the employment of mercury on account of the bubo; we may then leave off the mercury, and use simply common means in the treatment of the glandular induration.

It frequently happens in persons of scrofulous constitution, or those otherwise of a weak habit of body, that the ulceration of the bubo extends, and becomes very considerable, that sinuses are formed by suppuration occurring in the loose cellular membrane about the bend of the thigh, and sometimes very formidable local mischief is the result. Under such circumstances I need not observe to you that a persistence in mercury would be most prejudicial—that it would aggravate all the unfavorable symptoms; and that in such cases we should give the patient the advantage of change of air (by sending him to the country, or to the sea-side), good diet, and tonic medicines—you must not think of persevering in the use of mercury.

When the integument covering a bubo has become very thin before it is opened, it often happens that the edge of the bubo is undermined in the ulcerative stage—that the margin is in a sloughy and unhealthy state, and that cicatrization does not take place in consequence. Here the progress of the cure will be much accelerated by removing with a pair of strong sharp scissors the undermined edge of the skin of the bubo: after doing this you generally find cicatrization take place very rapidly. In such instances, if cicatrization does not advance as fast as you expect, it will be well to apply mild stimulant applications, such as red precipitate ointment, or the solution of nitrate of silver, and in addition to these, to use pressure by compresses, firmly bound down by bandaging or strips of plaister.

We sometimes meet with a swelling of the glands of the groin, of an indolent kind, which does not proceed to suppuration, and does not disperse—the glands remain swelled and painful—the patient is prevented from using ordinary exertion, and continues much in the same state for a considerable time. Under such circumstances the application of a blister to the surface of the skin is often very advantageous. Sometimes such applications will increase the inflammation in the glands, and bring it on to suppuration; and at others it will produce a dispersion of the glandular swelling.

Secondary Syphilis.

I have, in the next place, gentlemen, to speak to you of the *secondary* symptoms of syphilis.

In general some interval of time elapses between the primary sores and the appearance of the secondary symptoms, and usually this interval is from six to twelve weeks; occasionally, however, the secondary symptoms come on at an earlier period, and even shew themselves before the primary affection has disappeared. It is not very uncommon to see a person having at one and the same time primary syphilitic sores, buboes, eruptions of the skin, iritis, and an affection of the periosteum or bones;—I say we sometimes see a patient with all these symptoms at one and the same time. The secondary symptoms, if I may use the expression, overtake the primary, and come on before their time. There are other instances in which the appearance of the secondary symptoms is more protracted—in which they do not shew themselves until considerably after the time that we should usually have expected them; and there are some instances in which a very long period of time elapses between particular symptoms of the venereal disease, and those that come on next in order.

It happened to me, not along ago, to see a gentleman who had a venereal eruption all over his body. The character of it was so strongly marked, that I had no hesitation in asking him immediately how long it was since he had had a primary syphilitic sore. Now the truth is, that it was so long that he had forgotten it, and he was rather surprised at my inquiry: it turned out to be 14 months. The primary syphilitic affection had got well 14 months before. I saw another instance, in which nearly two years had elapsed between the primary sore and the syphilitic eruption which was the consequence of it. I had also occasion to see a gentleman who had been under my care for a primary syphilitic sore, and subsequently for a sore throat consequent on it; and this gentleman had married—he had married about twelve months after he had recovered from these symptoms. He came to me about three years and a half after his marriage, and then he had got syphilitic symptoms of a very well marked kind, which had recently occurred. They got well tolerably soon, but there could be no doubt as to their syphilitic character. It has lately happened to me to see two instances of sore throat that I could not have hesitated at all in calling syphilitic, if I had only looked at the throat, and considered that without a reference to other circumstances out of which they arose. One was a patient in this Hospital, and the other was a gentleman that consulted me in private. These were both individuals in whom you could not account for the ulceration of the

throat in any other way ; and I think in the one there had been no primary syphilitic sore for eight years, and in the other as much as ten years had elapsed.

There seems, therefore, considerable latitude in respect to the time that may elapse between primary and secondary syphilitic symptoms ; and I feel unable to point out the limit in this respect—to say what length of time may be considered as absolutely securing a person from a recurrence of the disease. I know some would say, particularly with respect to the last cases, that they could not be regarded as syphilitic—that they must have arisen from some other cause—that the time was too long for them to have arisen from the cause that I have supposed. I do not know upon what ground that assumption proceeds. If six or twelve months may elapse between the primary and secondary symptoms, or between two particular attacks, in the latter case,—if six or twelve months, I say, may elapse, I do not know why several years may not : it is a question of experience. I would only say, so far as those cases I have alluded to go, that I was fully satisfied of the syphilitic nature of the symptoms in each instance ; and therefore I do not feel able to define the time after which we should say an affection cannot be syphilitic.

The occurrence of constitutional symptoms is very commonly preceded and accompanied by a considerable degree of feverish disturbance. In this respect there is a kind of analogy between the constitutional symptoms of syphilis and those of *exanthematous diseases* ; for the secondary affections shew themselves by a more or less marked cutaneous eruption, and, in some instances, the febrile disturbance of the system is strongly marked.

I have already alluded to the *general* symptoms which make up constitutional syphilis, and therefore I need not go over the ground again ; and I have now to explain to you *particular* varieties.

In the first place we have various forms of cutaneous eruption. Scaly syphilitic eruption is one of the most common. In this case the skin, before the eruption appears, exhibits a kind of mottled or marbled aspect all over the body. If you strip the patient, although the skin and cuticle are in a natural state, you see, as it were, spots or streaks shining through the cuticle, which give it a mottled appearance. Very soon you observe spots of a reddish brown, or what would be called coppery red colour, on the skin ; and this has been always considered as the character of venereal eruption. This reddish brown superficial discoloration of the skin becomes more deeply marked, the cuticle covering it becomes scaly, desquamates, and, in fact, separates. That which remains assumes a more scaly appearance ; the spots increase in size and run together, so that

you have considerable patches on the skin, in various parts of the body, assuming this color. After a time, these discolorations become large in size, and particularly vivid ; they have a bright coppery red, and the cuticle becomes scaly over them. They are strongly marked when they occur in the palms of the hand and the soles of the feet ; there the contrast between the color of the healthy and diseased skin is very strong, and the cuticle being thick, it becomes fissured, cracks, and assumes a whitish appearance ; so that the character of a venereal eruption of this kind is strongly exhibited in these parts. The eruption in this state, would come under the description of the *lepra vulgaris*, or the *psoriasis inveterata*, of Drs. Willan and Bateman.

Very frequently syphilitic eruption exhibits itself in a *tubercular* form. In the scaly eruption that I have just mentioned to you, the discoloration is superficial, and the coppery red spots do not rise above the level of the surrounding sound skin ; but in the tubercular form, you have a similar discoloration with the part raised more or less, and as it proceeds the cuticle goes into a scaly state, so that it is in fact a scaly eruption, although there is a tubercular elevation of the cuticle in the first instance.

In other instances there is a more acute affection of the skin, active inflammation, with the formation of inflamed pimples, or *papulæ*, as they are technically termed. These arise in clusters, or patches, in various parts of the body, and after lasting for a certain length of time, they vesicate on the surface, or slightly suppurate ; they then dry up, and go into a scaly state ; and you have a succession of such *papulæ* or inflamed pimples, forming over various parts of the body. This is the papular venereal eruption.

There is another variety, in which there is at first the formation of vesicles, or pustules—that is, inflammation of the skin occurs. Effusion takes place from the inflamed surface, and the cuticle is elevated into vesicles, or pustules, which proceed and form ulcerations—that is, the pustular venereal eruption.

These are the principal forms of eruption that are observed as the secondary symptoms of syphilis : a scaly eruption, which may be called syphilitic lepra, or psoriasis—a tubercular eruption—a papular eruption—and a pustular eruption, proceeding to ulceration.

Now you do not find that these eruptions are always distinct ; frequently they are so, but sometimes these different characters of the eruption are complicated—that is, you find an eruption partly tubercular and partly scaly ; or you may see a mixture of pustular eruption with the scaly ;—you do not, in short, find them invariably existing in separate and distinct forms.

The pustular eruption spreads into ulcera-

tion; the cuticle which has been elevated by lymph, or pus, gives way, and the fluid which is discharged encrusts upon the surface; the skin ulcerates under this encrustation, a great discharge of matter takes place, and the encrustation is increased in consequence of it. If you keep the part moist and covered, you see the ulceration; but if you leave it exposed to the air, the matter concretes—and in that way the ulceration is covered with a crust more or less thick. The ulcerations that are thus formed are superficial sores, occupying merely the surface of the skin, generally of a circular shape. In other instances, these degenerate into very foul and intractable ulcers, of a phagedenic character. Very commonly they have the circular form, and you find they heal up in the centre and spread in circumference. There is healing up of the sore at the centre, and a phagedenic, foul, or tawny-colored margin, by which the ulceration extends. Frequently the sores are of a crescent shape—that is, they have a convex edge, by which the ulceration extends, while they heal up at the concavity. Sometimes the phagedenic edge is simply a tawny-colored margin; at other times it is considerably elevated and almost sloughing, with a red, angry, fiery state of the surrounding skin.

There is a considerable variety in the character of these syphilitic ulcerations of the skin, all of which originate, in the first instance, from a vesicle, or pustule.

The skin is also liable to other affections dependent on venereal causes. Ulcerations take place, of a secondary character, on the thin skin about the anus, and there they commonly have elevated margins, with somewhat of an indurated base, something like the indurated syphilitic sore. At other times, the ulcerations about the margin of the anus have the appearance of fissures, or chaps; the natural folds of the skin about it seems to give rise to these particular forms of ulceration; which are called, by the old writers, *rhagades ani*. *Rhagades* means ulcerated chaps of the skin. The skin at the roots of the toes, and of the surfaces which are opposed to each other, often go into a state of foul ulceration, with an elevated surface, and a copious, thin, very offensive discharge. That form of ulceration has been called *rhagades digitorum*—chaps of the toes. The parts which are immediately the seat of primary syphilitic sores, more especially in females, often produce warty excrescences, which sometimes occupy a surface not highly elevated, but of considerable extent; and then they are called *condylomata*. These are, perhaps, hardly to be regarded as syphilitic; occasionally they are the result of irritation in the skin, in consequence of syphilitic disease affecting the neighbouring parts.

In conjunction with these affections of the skin, we not uncommonly have inflammation of the iris taking place—and that is a form of disease which may occur in conjunction with various syphilitic eruptions; thus we may have it either with the papular or scaly variety. Then, either together with the eruption on the skin, or existing after it, or independently of it, it is not uncommon to have various ulcerative affections of the fauces and mucous membrane covering the neighbouring parts—sore throat. In the first place, there is a form of ulceration principally observed in the tonsils, in which there is a deep ulcerated excavation taking place in those parts—a destruction of the textures, without any attempt at reparation—a loss of substance, as if a part had been scooped out; the surface exhibiting a tawny appearance, as if from the adherence of a thick yellow kind of matter to it;—these have been called lardaceous ulcers, the appearance being much as if the surface were covered by a stratum of lard. It merely denotes the ulcerated excavation without an attempt at repair, and is principally seen in the tonsils; but you may sometimes observe the same kind of ulcerations running along the palate and edge of the uvula; and you find these ulcers will take place with very little apparent disturbance in the mucous membrane. Generally there is nothing like inflammation, no thickening or increased determination of blood, and sometimes the ulceration has proceeded to a considerable extent before the patient is aware of its existence. It is a chronic kind of process, which takes place without any active disturbance in the part. Frequently, however, there is a much more active inflammatory disturbance of the mucous membrane of the throat, which becomes red and swelled, secreting more mucus than usual, a good deal of discharge from the throat, and a superficial ulceration; white spots spreading over a considerable part of the velum palati, or tonsils;—in short, there is superficial ulceration, occupying a certain part of the mucous membranes of the fauces.

Again: the throat may be the seat of formidable phagedenic ulceration, that is, there may be a destruction of the substance of the mucous membrane; it may have a sloughing or phagedenic character, with a bright red appearance of the surrounding portion of the membrane, and this occupying particularly the upper and posterior part of the pharynx, extending above the situation of the velum palati, and running down further than you can see by inspection externally.

Frequently, ulceration is not confined to the throat, but may take place also on various parts of the tongue, or of the mucous membrane of the cheeks or of the lips. Sometimes there is a state of ulceration of the mucous membrane in these parts; some-

times the mucous membrane is thickened—raised into a kind of irregular swelling.

The limbs, the joints, and the bones, are likewise the seat of various affections connected with syphilis. At the outset of constitutional symptoms, it is not uncommon for patients to complain of severe pain in the limbs generally, and of the joints, without our being able to observe any swelling or other obvious change in the state of the parts. In the more advanced stage of syphilitic affection, however, we find severe pains in the central portion of the limbs; not in the joints, but in the intermediate parts, and we then usually find that swelling takes place either in the bones or periosteum covering them. Sometimes the swelling is of that hard, incompressible nature, that we cannot doubt that the bone is the seat of the disease; and sometimes, although it is firm, it is yet of a more yielding kind, and such as to lead us to suppose that the periosteum is the seat of the affection. There may be exostosis, or periostosis,—forms of disease of the bones and their covering. The suffering is generally severe in these cases, and is most felt at night. It not uncommonly happens that the patient is free from pain during the day, but when he is warm in bed severe pain comes on, that lasts through the night, and prevents him from getting rest, although it again goes off towards morning. In some cases of this kind, there is a simple thickening of the bone or of the periosteum, from deposition; sometimes there is a more active affection; the disease proceeds to suppuration, matter forms under the periosteum, and makes its way externally; under such circumstances a portion of the bone perishes, syphilitic caries takes place, that is, the surface of the bone ulcerates, and perishes to a certain extent. In the more protracted cases of syphilis, it is not uncommon to have considerable swellings, together with a painful state of the joints. In the early periods of constitutional syphilis, you have uneasiness in the joints without swelling, but where it has existed for a long time, the patient experiences considerable pain, inflammation of the synovial membranes of the articulation occurs, and swelling of the joints is the consequence of the deposition from the inflamed surfaces.

Such, then, are the more common appearances of constitutional syphilis, or lues venerea, as it is called; various eruptions of the skin, various ulcerations, ulceration of the mucous membrane of the fauces, and the neighbouring parts of the mouth; pain of the limbs and of the joints; swelling of the periosteum or bone; iritis frequently taking place in conjunction with affections of the skin.

There are other forms of secondary syphilis, which are less common. Sometimes there is a state of purulent discharge from

the external meatus auditorius; the lining membrane of the ear becomes inflamed, and a thick purulent discharge takes place from it, generally accompanied with deafness. Sometimes a chronic swelling of the testicle occurs: the testicle becomes enlarged, hardened, and is usually irregular or tuberculated on the surface; considerable pain attends the affection; commonly it affects only one testicle, sometimes both. When the other bones of the body are affected, it is not uncommon to have those of the nose and of the palate suffering. Probably the affection of these parts is not in its nature dissimilar to that which takes place in the shin-bone. Considerable pain is experienced in the part; the membrane covering it ulcerates, part of the bone comes away, and a foetid discharge takes place. Sometimes the affection of the throat spreads to the larynx, and this, in fact, is a very serious extension of the disease. When we see how close the mucous membrane of the larynx is to the mucous lining of the throat, which is so commonly diseased in syphilis, we are, perhaps, rather inclined to wonder that this affection does not take place more frequently. It is, however, not a common occurrence for syphilis to spread to the larynx; sometimes, indeed, the ulceration extends to the rima-glottidis, and sometimes necrosis, or partial death of the cartilages, takes place. This is a very serious occurrence, for all affections which are capable of interfering with such an important function as that of respiration, must endanger the life of the patient.

These are the various affections which occur in constitutional syphilis, or lues venerea. Now we observe in general, that they shew themselves first in the skin; often, at the same time, in the throat, the eye being also frequently involved (iritis being added); then pains in the limbs and joints: such is the conjunction of symptoms which usually exhibit themselves in the first instance, when the disease extends farther than its primary seat. The bones, the nose, and the joints, are usually affected at a remoter period. Mr. Hunter divides the parts affected by constitutional syphilis into two classes, and calls them the first and second order of parts. Those that I mentioned to you first, he calls the first order; the bones, and nose, and joints, he calls the second order. He says, constitutional syphilis first affects those of the first order, and subsequently shews itself in the second order, and as a general observation this may be admitted, but it does not hold invariably true, as I have stated already that the secondary symptoms sometimes come on before the primary are gone, and occasionally the second order of parts is affected in the first instance.

Not long since I saw a gentleman who had primary sores on the penis that had last-

ed a considerable time; the ulceration had extended through the reflection of the prepuce, and burrowed under the skin; there was considerable induration, that had lasted a long time, perhaps six or seven weeks or more, and he had a swelling of the periosteum covering the sides of the shin;—that was the first appearance of the secondary symptoms in this case. I remember another instance of a gentleman in whom the first symptom that appeared after the primary sore, was a swelling of the periosteum of the frontal bone. Hence you are to regard these observations respecting the first and second orders as true only in a general sense, and not as holding good invariably.

ON THE
TREATMENT OF CERTAIN INJURIES
OF THE EYE.

By SAMUEL BARTON.

HAVING been surgeon to the Eye Institution of Manchester during the last fourteen years, in which charity upwards of one thousand patients are annually received, the appointment has afforded me many opportunities of witnessing the consequences of different diseases, and wounds occurring to the eye, under different modes of treatment; but in this paper I intend to confine myself to the consideration of those cases—

1st. In which the cornea has been punctured by a sharp body, and the capsule of the crystalline lens wounded at the same time; and

2dly. In which, without any penetrating wound of the cornea, the capsule has been ruptured, and the lens forced into the anterior chamber.

Though many authors have given very ample directions for the treatment of the various injuries to which this organ is liable, and in general these are so excellent that the practitioner may with safety adopt them; I am not aware that an early extraction of the lens has hitherto been proposed by any writer as the means of affording the patients, who have suffered from either of the accidents under consideration, the best chance of escaping with the least injury of vision and deformity.

In most instances we find that the cornea has been either punctured with

some sharp instrument, or pricked with a thorn; and whenever the lens has also suffered an injury, great pain and inflammation most commonly supervene. The usual mode of treating such accidents is generally limited to the promoting or subduing inflammation, by venesection, leeching, &c. and waiting patiently for the absorption of the lens.

This practice will sometimes be found successful; but in the majority of cases we shall have to contend with a tedious and severe inflammation in the first instance, and eventually an obliterated pupil, with a thickened capsule, adhering firmly to the iris, that cannot be dislodged, and not unfrequently suppuration of the eye-ball.

My attention was directed to the improved treatment of these cases of early extraction of the lens, from comparing the advantages with the disadvantages, resulting from the different operations for cataract. From observation I found that more inflammation of the eye, and more constitutional disturbance, ensued from the operations for the depression of the lens, and for its solution, than from extraction, whenever the last operation was well performed.

It will be an objection with some surgeons to interfere with a single cataract, when the vision of one eye is perfectly good, and in most cases of spontaneous cataract I should agree in this opinion; but in the accidental cataract I should, from experience, recommend the operation of extracting the lens without delay.

My mode of performing the operation varies very little from that of the usual manner of extraction; but in making the incision in the cornea, I am governed with respect to the extent of it by the state of consistence of the lens, and the situation of the wound of the cornea.

As in young subjects the lens will be generally soft, if the situation of the original wound of the cornea produced by the accident be not unfavourable, a smaller division of the cornea will answer the purpose than when the lens is hard.

When the accident takes place in an old person, we have reason to expect to meet with a harder lens, consequently a larger division of the cornea is required, provided that the nature of the case will admit of it.

In performing the operation, I generally use Beer's extracting knife, and having carried the point into the centre of the pupil, I then raise the handle of the instrument so as to depress the point, and keep it there for a few moments, until I have ascertained whether the lens will escape by merely making a slight pressure with the knife kept in this position—and in many instances this takes place.

If I find that the lens is too hard to pass, I extend the incision before I withdraw the knife, and finish the operation with the scoop.

Although I am an advocate for extracting the lens early in such cases, there are certain injuries of the cornea in which it will be necessary to wait until some reparation has been made: for instance, when the cornea has been divided by any rough cutting instrument, producing an angular wound with ragged edges, it will be desirable to wait and employ those measures which are the most likely to restore union.

After my early operations, I dressed my patients either with a wet cloth, or a plaister of simple cerate, and a bandage placed lightly over the eye. By such loose dressings it is scarcely possible to keep the eye in a sufficiently quiet state till perfect union of the cornea shall have taken place; and it was evident to me, that I had not only very great difficulties to encounter in the after treatment, but that the operation of extraction failed in some cases in consequence of such dressings. I therefore determined to employ those means that were the most likely to keep the eye-lids steady, without producing pressure, and thereby promote the union of the wound of the cornea by the first intention.

After the pupil has been cleared of the lens, the eye is to be treated as in cases of extraction; and the plan that has proved the most successful in my practice is to place two slips of court plaister, four inches in length, and a third of an inch broad, in a perpendicular direction across the eye-lids of both eyes.

This I find to be the best dressing, since without occasioning pressure or uneasiness, it at the same time allows the discharge of any fluid.

If the process of healing be not interrupted, we shall find in the course of three or four days that all discharge has

subsided. The patient will sometimes complain of a pricking sensation in the lids, and it will then be necessary to remove the plaisters carefully, and replace them by new slips; but in changing the plaisters, the eye should not be opened for an examination until the fifth or sixth day after the operation.

Since I had recourse to this dressing after the operation of extraction, my cases have been very successful, and attended with less trouble and anxiety, than when I have operated by depression or solution; and I can confidently recommend it when either the cornea has been opened to make an artificial pupil, or in injuries from accidental circumstances; and the same applications of the slips of court plaister will be found advantageous, by those who prefer the operations, for depression or solution.

I can adduce many examples illustrative of this practice; however I will, on this occasion, confine myself to the relation of the two following cases:—

CASE I.—In the spring of 1824 a country gentleman, fond of field sports, received a lash from a thorn in the right eye, and instantly found that it was deprived of vision. Several days had elapsed when he consulted me. Active inflammation in the eye had now set in, with excruciating pain in the forehead, and great excitement of the vascular system. The thorn had entered the cornea, passed obliquely into the lens, and broken up its texture. The wound of the cornea admitted of the escape of the aqueous humor as it was secreted. Bleeding, leeching, purgatives, antimonials, cold collyria, were employed several days without effecting any relief. I now determined to divide the cornea, and extract the lens. The operation very shortly relieved the pain, and by the usual antiphlogistic treatment, and occasionally employing the extract of belladonna, the pupil cleared in the course of three weeks, and assumed a round and regular appearance, and was sensible to the various degrees of light.

I have frequently seen this gentleman, indeed lately I saw him pursuing his favourite diversion of shooting, and he astonished me by declaring that he could see to shoot with the injured eye perfectly well, without the aid of his glasses.

CASE II.—A piece of iron, weighing about two ounces, struck the eye of a

mechanic, who happened to be engaged in tempering it; the violence of the blow brought him to the ground, and on recovering, he found the eye to be deprived of sight. He had been treated by a surgeon in his own neighbourhood about three weeks before he consulted me. This person described his sufferings as having been so extremely severe, that he had been deprived of sleep for several days. He complained of a throbbing pain in the eye-ball and across the forehead; there were no signs of the cornea or sclerotic tunic having been penetrated, but the lens had been dislocated, and appeared in the anterior chamber, pressing upon the cornea. The extraction of the lens and bleeding relieved him, and he passed a good night's rest.

I do not recollect any particular circumstances deserving of observation having occurred during my attendance. About one-third of the inferior part of the cornea had suffered much more than the rest, from the lens having pressed upon it—so much, indeed, that it would have escaped shortly by ulceration.

The pupil is fixed and oblong, and notwithstanding there is this opacity of the inferior edge of the cornea, the patient is well pleased with a degree of vision that would be very useful, provided he should be so unfortunate as to be deprived of the sound eye.

Manchester, 5th March, 1830.

ON A REMEDY
FOR
SOME CHRONIC AFFECTIONS OF
THE CHEST.

BY PHILALETHES.

No. I.

To the Editor of the London Medical Gazette.

SIR,

UNDER the incognito of my present designation, I purpose sending you, from time to time, some short notices of various subjects in the practice of physic, which, as during a pretty extensive experience, I have found useful to myself, I would willingly hope may prove so to

some of your readers. I begin these scraps by the recommendation of a remedy of great efficacy in some protracted cases—chiefly inflammation of the chest; and I do so in order that I may become favourably known to your readers from the beginning;—for this I am persuaded will be the case, if they will give a fair trial of the remedy, in the cases which I proceed to describe.

The cold lotion is universally applied to inflammatory affections of the head; and nearly twenty years ago this remedy was strongly recommended by Dr. Sutton, in an interesting series of Essays on Delirium Tremens, &c. in inflammation within the abdomen. Whether that gentleman or others may have recommended the lotion in inflammation of the chest or not, I really do not know, and have not time to inquire. My object, at any rate, is different: it is to recommend the continued application of a spirituous lotion in certain chronic affections of the chest.

This lotion is prepared by mixing one ounce of alcohol with seven of water, and adding a little Eau de Cologne, or spiritus ammoniæ aromaticus.

Several months ago I was consulted in the case of a young lady, residing in Brompton-Square. Her mother, amongst other things, said that her daughter had suffered from a troublesome cough, without one day's intermission, for two years. I prescribed for the general health, and tried many of the usual remedies for protracted catarrh, in vain. I then recommended the cold lotion to be applied by six folds of soft linen, two inches broad, across the upper part of the chest. From that day the cough abated, although the season was, and continued, inclement; in a month she was free from cough, and she has remained free from complaint during several successive months.

The efficacy of this remedy, in this young lady's case, was so striking, that an uncle who had been subject to what (from the description given of it) I imagine to have been a protracted, hoarse, laryngeal cough, for several years, also had recourse to it. The issue was the same; but as I never saw the patient, I think it useless to add any longer account of his case from what must be vague description.

The next case is that of Captain M., long engaged in the India merchant service. He had for months a trouble-

some cough, with pain in the cardiac region. Other remedies not having given relief, I recommended the continued application of the alcohol lotion. In a week or two he was decidedly better; in a month well. His case seems to have been chronic catarrh, with some pleuritic affection.

Captain M. has since gained great fame himself, in his own neighbourhood, in Cambridgeshire, for the cure of coughs by this very remedy.

A young lady was most judiciously treated for a very severe pleuritis and pneumonia, at Tunbridge-Wells. She did not, however, lose a sense of tightness and cough, and she left the superintendence of a school and came to town. Here, after various remedies had been tried in vain, she was directed to try the cold lotion. This was not done without some prejudices against it, and some fears of "cold" and other terrible consequences. None such followed, however, and the beneficial effects of the lotion were such, that although this patient is not even now, after the lapse of very many months, quite cured, yet she, of her own accord, continues its use uninterruptedly.

The next case which I would record is that of Mr. Smith, a clergyman and graduate of Cambridge. He came to me with pain low in the side, and with many symptoms threatening phthisis. I certainly thought his case full of danger, if not even of despair. I gave him rhubarb, recommended sponging in the morning, the mildest kinds of animal food, a system of the gentlest exercises, and the cold lotion. He recruited, lost his cough, and at length, under the continued application of the lotion, the pain of the side.

I still think there are tubercles in this case. The patient's family is consumptive. I do not recommend the lotion as a cure for phthisis; but in phthisis there is frequently (almost always) some degree of pleuritis;—for this I recommend the lotion. I do not even pretend to say what proportion of the good which was effected in this case accrued from the use of the lotion. The patient himself called it his "breast-plate," and promises, in a recent letter, to come and present himself before me "in rude health."

I might mention the case of a young lady of Stanmore, in whose case I met Sir Henry Halford; but it is so similar

to that of the young lady of Brompton-Square, without being either so protracted or so severe, that it would be but needless repetition. In it there was, however, more fear of consumption.

A gardener, living at Cheam, was long affected by cough, and some degree of dyspnoea. He was so much benefitted by the use of the lotion, as to have passed through this severe winter very well.

Another gardener had cough and dyspnoea in a severer form, attended with anasarca. After many unavailing trials of different remedies, I recommended the spirit lotion, in despair, however, of doing any good, he was so thin and feeble, and apparently sinking. From that time he slowly recovered, using no other remedy of any kind except mild aperients as they appeared to be required.

As numbers add to the weight of testimony in favour of a remedy, I may just add that a lady from Leicestershire, long affected by cough and pain threatening phthisis, and my own house-keeper, labouring under similar symptoms, and obliged to invalidate herself for many months, recovered under the influence of this remedy; and that a poor woman residing at Brixton, and affected with cough for months, was promptly restored to health by its use.

I think too that I have seen two cases of chronic hepatitis benefitted by the lotion.

I have applied the alcoholic lotion in hæmoptysis, and in some cases which I cannot, however, distinctly designate, with great advantage.

In a word, I would recommend the spirituous lotion in most, or all, chronic cases of pectoral affection. In many we shall have the pleasure of seeing our patient recover under its use; in none can it do any injury. I have never known it give cold; but I generally take the precaution of directing it, in its first application, to be employed tepid, and to be used under the bed-clothes at night.

If, sir, this paper make its early appearance in your excellent publication, I promise you that you shall soon hear again from your friend and well-wisher,

PHILALETHES.

HÆMORRHAGE FROM THE EXTRACTION OF A TOOTH.

To the Editor of the London Medical Gazette.

SIR,

SHOULD you think the following case of hæmorrhage, consequent on the extraction of a tooth, worthy a place in your valuable journal, you will oblige me by its insertion.

I have the honour to be, sir,

Yours obediently,

JOHN KENDRICK,

Member of the Royal College of Surgeons.

12, Manchester-Street,
Manchester-square.

On the 27th of February last I was requested to visit Mr. P. a remarkably fine young man, 23 years of age, who the day before had the first molar tooth on the left side of the upper jaw extracted by a dentist; a portion of the alveolar process had been removed with the tooth, and left rather a frightful cavity. On my arrival I found him bleeding copiously, and he had been doing so for four or five hours before I was called in. On examination I found the cavity filled with coagulum, on the removal of which the blood flowed with great rapidity, per saltem, which clearly indicated that it proceeded from an artery. The tooth having been destroyed, it was impossible to make any use of it as a means of pressure. I immediately adopted the plan of plugging up the vacuum with lint dipped in the tinctura ferri muriatis: in an hour the hæmorrhage ceased, but returned in four hours with redoubled violence. This induced the family to call me up, and on reaching the house I found him with cold extremities, a pulse almost imperceptible at the wrist, and to all appearance in a state of imminent peril. I now made a cast of the parts with soft wax, from which I moulded a form with resin and wax, in equal proportions, which filled the cavity entirely. I left him, and all went on well for sixteen hours, when I was again called to him, and found him in precisely a similar situation. I now made use of the argentum nitratum, which stopped the hæmorrhage again. At the expiration of twelve hours it again returned, and I now became afraid that my patient

would sink, and began to look forward to an operation more formidable—that of taking up the carotid; and had determined on calling in farther aid. In this state of affairs I tried a pledget of cotton wool, dipped in the strongest alcohol, and repeated the application every three or four hours: this plan was persevered in until the following Sunday (making in all nine days), when the hæmorrhage ceased, and my friend is now recovering, though labouring under great debility from the loss of so large a quantity of blood.

I have before found alcohol to be a very efficacious remedy in hæmorrhage, when the artery is so situated as not to admit of its being taken up; and cotton wool is a very useful pledget, as it makes its way more readily into the various cavities than lint or tow.

A very extraordinary feature in this case is, that my patient is one of a numerous and respectable family in Norfolk, and in almost every instance where a tooth has been extracted, they have all more or less been subject to violent hæmorrhage. When he himself was 17 or 18 years of age, he had a tooth extracted, and was then troubled with a serious hæmorrhage for fourteen days, but not to the extent of this last attack. I am aware that there are many cases of a similar nature occurring frequently, but not of the hæmorrhage being so considerable; and I think the case is rendered still more interesting, from the circumstance mentioned with regard to so many members of the family.

ANATOMY AND PHYSIOLOGY OF THE EAR.

To the Editor of the London Medical Gazette.

SIR,

HAVING observed in your Gazette of last week a report of my paper, lately read before the Royal Society, on the Anatomy and Physiology of the Ear, which report is copied from the Literary Gazette*, I beg to offer, for insertion in your valuable periodical, a few ob-

* We readily give admission to Mr. Chevallier's letter;—for the accuracy of a report, avowedly taken from another journal, of course we are not responsible.—E. G.

servations on the manner in which my discoveries are there treated.

In the beginning of the report in question, it is stated that, on a former occasion (Med. Chir. Trans. vol. iii.), "*I endeavoured to shew* that the malleus and incus are so closely united by ligaments as to preclude the possibility of their moving as levers upon each other." Now, sir, as I have given, in that volume of the Medico-Chirurgical Transactions, a drawing of the ligament which unites the manubrium of the malleus to the long process of the incus, and professed myself ready to exhibit the preparations in my possession which demonstrate its existence, I leave you to judge whether I am correctly represented, as merely "*endeavouring to shew it.*"

The rest of the report which you have republished is in the same style; representing the self-evident truths upon which I have argued (for example, that every sound has the characters of tone, loudness, and quality) as gratuitous dicta!—*Mathematical demonstration*, (e. g. that the pressure of a fluid, forced through a conoidal tube, is inversely as the squares of the areas of its transverse sections,) a mere assumption!—*Matters of fact, resting on ocular demonstration, and for the proof of which I appealed to preparations in my possession* (e. g. the action of the stapedius muscle, the comparative size of the promontory in various animals, the medullary valves of the semicircular canals, the circulation of the fluid of the labyrinth through them, under the impulse of the vibrating stapes, the organ which I have called the poiometer, &c. &c.)—these the author of the report calls "*conceptions,*" "*beliefs,*" "*thoughts,*" "*imaginings,*" &c.; while he altogether omits (no doubt accidentally) even so much as to mention the fifth branch of the portio mollis, which I have also discovered and preserved in my museum.

There are other sentences in the report which I shall not remark upon at present; they incline me to believe that the author (whenever he was) intended me no harm;—while I still feel it my duty to inform your readers, and the scientific world in general, that my discoveries in the ear do not rest upon hypothetical reasoning, the fancies of my own imagination, or the facility of my belief; but upon ocular demonstra-

tion in every point but one—and this is the mathematical truth above referred to, and which is well known by every mathematician as an undeniable fact.

I am, sir,
Your obedient servant,
THOS. WM. CHEVALIER.

62, Torrington-Square,
15th March, 1830.

ABUSE OF PUBLIC CHARITIES.

To the Editor of the London Medical Gazette.

SIR,

THERE are several ways in which the attendance on the police by the public charities may be viewed; but though in all of them it must be condemned, I shall only touch on one—the positive injustice done to the sick poor by it.

This is so obvious, that but for the proofs made public, I could scarcely have believed that any member of government, or even an inferior officer, could have been found so steeled against all the feelings of humanity as, on any ground, but still less for the sake of appearing economical in such a trifle, to have attempted to wrest from the sick and the destitute the pittance subscribed for their relief; yet this, I assert, if they felt or thought as other men, must have appeared to them to be the effect of getting from the charitable institutions what individuals could not, unless at a higher rate, supply.

But in order to make this clear to the dullest eye, permit me to say, that though, speaking generally, the Dispensaries allow a patient to be constantly on their books for every guinea annually subscribed, they by no means expect that this attendance is to be generally exacted; indeed, experience shews the average number of patients sent by each of such subscribers is about *two* per annum only, and that even for these there is much economy required in furnishing the requisite medicines. What then must be the effect of the full privilege granted to other subscribers being exacted in favour of the police? I answer, the ruin of the institutions—the bereavement of the poor of all they have to depend on in the hour of sickness.

The only excuses I

for

this misapplication of the funds of charitable institutions are these:—

1st. That as the pay of the policemen is stopped when they are on the sick list, they become objects of pauper relief. To which I reply, that they are only in the situation of mechanics unable to pursue their work, and that out of their savings they should (like the class of men I speak of) provide for their own attendance, or that the pay stopped should be paid for it—which would be nearer the mark as a remuneration to the charities, than the subscriptions now paid.

2d. That each parish having to pay for its share of the police establishment, the men when sick would become an extra charge, and increase the parochial rates, unless the Dispensaries and Hospitals opened their doors to them. Let them then be sent to the parish workhouses, and the expense fall equally; but do not divert from the poor, the sick, and the wretched, who have no parish claims, funds which a few who feel for them subscribe for them alone.

Yours,
ΦΙΛΑΝΘΡΩΠΟΣ.

BIOGRAPHY OF DR. WOLLASTON.

DR. HYDE WOLLASTON was the second son (and one of seventeen children) of the first of the three brothers, by Miss Althea Hyde, of Charter-house Square, and was born August 6th, 1766. He received his academical education at Caius College, Cambridge, where he proceeded M. B. 1787, M. D. 1793. So ardent was his application to his studies, that he was, on taking his degree, the senior wrangler of his year; and probably owed to the exertions of that period of his life the pre-eminence in science for which he was subsequently so distinguished.

He first settled at Bury St. Edmunds, where he commenced practising as a physician; but with so little success that he left the place in disgust, and removed to London.

For the interest of science it was fortunate that Dr. Wollaston met with no better encouragement in the metropolis than that which he had found in Suffolk. Soon after his arrival in London, a va-

cancy happening in St. George's Hospital, he became one of the candidates for the appointment of physician to that foundation. His principal opponent was Dr. Pemberton, who, either by superior interest, or, as is commonly supposed, by his more pleasing and polished manners, obtained the situation. This second defeat in his professional career considerably lessened the ardour with which Dr. Wollaston had set out: he expressed his determination never again to write a prescription, were it even for his own father; and, carrying this resolution into effect, he turned his attention wholly to natural science, forsaking what might then have been supposed a far more likely road to wealth than that in which he amassed his ample fortune.

But, in resigning his prospects as a medical practitioner, this industrious as well as eminent man by no means intended to pursue science in any way but in earnest; and the magnificent discoveries, magnificent in point of real utility, which he made, afford ample proof that it was not till after due deliberation that he thus changed the nature of his studies. Though almost every branch of science at different times engaged the attention of Dr. Wollaston, chemistry was that to which he seems to have been most ardently devoted; and it is by his investigations in this department of natural philosophy that he will enjoy his greatest share of lasting reputation. One trait in his character probably contributed in no small degree to the success he obtained through life, and that is, the extreme candour with which, when engaged in his favourite pursuits, he would acknowledge the difficulties that offered themselves to him, and which this candid avowal to men, his equals in knowledge though not in perseverance, by eliciting useful hints, frequently enabled him to surmount.

The manner in which he was accustomed to pursue his enquiries was almost peculiar to himself. It was always on the smallest specimens of the substance which he wished to analyse that his experiments were made; and his laboratory was, it is said, only in proportion to the magnitude of his materials. Thomson, in his "History of the Royal Society," when speaking of modern British chemistry, says, that "three distinct schools, (if we may use the expression) have been established by three gentlemen,"—Dr. Wollaston, Mr. (the

late Sir Humphry) Davy, and Mr. Dalton. "Dr. Wollaston," he adds, "possesses an uncommon neatness of hand, and has invented a very ingenious method of determining the properties and constituents of very minute quantities of matter. This is attended with several great advantages: it requires but very little apparatus, and therefore the experiments may be performed in almost any situation: it saves a great deal of time and a great deal of expense; while the numerous discoveries of Dr. Wollaston demonstrate the precision of which his method is susceptible."

Among the delicate instruments, which he was accustomed to make in a remarkably neat manner, was a sliding rule of chemical equivalents, which is exceedingly useful to the practical chemist. He also constructed a galvanic battery of such small dimensions, that it was contained in a thimble. By inserting platina wire in silver, and when at a great heat drawing out both together, and afterwards separating them by dissolving away the silver with nitrous acid, he likewise produced some wire of platina of so diminutive a diameter as to be very much finer than any hair, and almost imperceptible to the naked eye.

Small, however, as was Dr. Wollaston's laboratory, and minute as were the means to which he had recourse in making his experiments, they proved exceedingly profitable to his purse. His discovery of the malleability of platinum, it has been asserted, alone produced about 80,000*l*. He is also said to have derived great pecuniary advantages from several of his other, and even minor discoveries and inventions, which, by being of a nature likely to make them immediately and generally useful, were certain in a short time to produce a considerable return. It has been doubted by some, whether this distinguished man, great as he was in science, and possessing many excellent qualities, would not have been greater, had his views been somewhat less directed to the acquisition of a fortune. But if the following story be true (and there is every reason to believe that it is so), it proves how very distinct a thing is the prudence which acquires wealth from the iron-hearted parsimony which buries it. Having been applied to by a gentleman who was involved by unexpected difficulties, to procure him some government situation, Dr. Wollaston's reply was, "I have lived to sixty

without asking a single favour from men in office, and it is not, after that age, that I shall be induced to do so, even were it to serve a brother: if the enclosed can be of use to you in your present difficulties, pray accept it, for it is much at your service." The enclosed was a cheque for ten thousand pounds.

Some curious anecdotes are told respecting the resolute manner in which Dr. Wollaston uniformly resisted the intrusion of either friend or stranger into his workshop. Among others, it is related, that a gentleman of his acquaintance, having been left by the servant to ramble from one room to another, till he should be ready to see him, penetrated into the laboratory. The Doctor, on coming in, discovered the intrusion; but not suffering himself to express all he felt on the occasion, took his friend by the arm, and having led him to the most sacred spot in the room, said, "Mr. P., do you see that furnace?" "I do."—"Then make a profound bow to it, for as this is the first, it will also be the last time of your seeing it."

Towards the latter part of 1828, Doctor Wollaston became dangerously ill of the disorder of which he died, and which resulted, it seems, from an unhealthy state of the brain. His conduct under the heavy dispensation of this malady may well be called "divine," if that of Socrates merited such an epithet. In the midst of disease and pain, and feeling that the duration of his life was precarious, he devoted his numbered hours to communicate, by dictation, and thereby to preserve all the discoveries and improvements which he had made, and the knowledge of which is calculated to be most beneficial to his fellow-creatures. A nobler example of fortitude and virtue has never been witnessed in any age or country.

A short time before his death he gave a fresh proof of his love of science, and of the interest he felt for its advancement. He wrote a letter to the secretary of the Royal Society, informing him that he had that day invested in the funds, in the name of the Royal Society, stock to the amount of 1000*l*., the interest of which he wished to be employed in the encouragement of experiments in natural philosophy.

When he was nearly in the last agonies a circumstance occurred which shows that he still preserved his faculties, and gives an interesting proof of the

power of his mind over physical suffering. One of his friends having observed, loud enough for him to hear, that he was not at the time conscious of what was passing around him, he immediately made a sign for a pencil and paper, which were given him; he then wrote down some figures, and, after casting up the sum, returned them. The amount was right.

Dr. Wollaston's death occurred on the 22d of December, 1828. A medical inquiry was instituted after his decease, respecting its immediate cause; and from the published report (see *Medical Gazette*, vol. iii. p. 293) it appears that an effusion of blood had taken place in the ventricles of the brain, which exhibited a very remarkable appearance. The great body of the optic nerve was converted into a tumor of the size of a hen's egg, was of a greyish colour, and firmer than the brain itself. In the inside it was found to be of a brown colour, soft, and in a half-dissolved state. The nerve contained scarcely any of its proper substance.

At the time of his death, Dr. Wollaston was senior Fellow of Gonville and Caius College. His remains were interred at Chiselhurst, in Kent. The funeral was, according to his particular request, exceedingly private, as he had desired that it should be attended only by the descendants of his grandfather*.

ROYAL INSTITUTION,

Friday, February 26,

HIS GRACE THE DUKE OF SOMERSET,
PRESIDENT, IN THE CHAIR.

Method of preventing Ships from Sinking—Calico Life Preserver.

MR. RALPH WATSON, who has published a pamphlet, entitled "A brief explanatory Statement of the Principle and Application of a Plan for preventing Ships foundering at Sea, and thereby rendering every Ship a Life-Ship," submitted to the members assembled this evening some details and practical illustrations of his scheme, the principle of which is neither more nor less than the hydrostatic law, that

every body which displaces so much water as is equal to itself in weight, swims therein; but every body which sinks, displaces no more than is equal to its bulk; and the application of which principle, to ensure ships from sinking, consists, according to Mr. W.'s plan, in fixing to the timbers and between the decks, in parts at present left void, closed copper tubes, from 12 to 18 inches in diameter, containing air sufficient to render the specific gravity of the ship, including crew and cargo, less than that of the water in which it floats, so that if a leak of any extent be sprung, the vessel can never be totally immersed. 10,000 cubic feet of air were stated to be sufficient for an 80-gun ship, and the first cost of tubes, fittings, &c. about 4000*l.* but as copper always retains its value, the real expense would be little more than the interest of the sum at first expended. Mr. W.'s experiments certainly proved the efficacy of his scheme, as far as an elegant model, tried in 20 gallons of water, can prove what would be the fate of a leaky vessel during a storm at sea. The preservation of the *Guardian* frigate, Captain Riou, which, though filled with water, made a passage of 1200 miles in 59 days, was given as a case in point; its escape being attributed to the empty water-casks having been closely bunged, and acting as safety tubes.

From 1793 to 1826, 373 ships and other vessels have been lost from his Majesty's navy, which it was presumed might by this plan have been preserved. These, with their cargoes, were estimated at 8 millions sterling; and to this must be added the lives of 7700 sailors. In the pamphlet we perceive a statement which we would fain hope somewhat exaggerated, viz. that "the number of merchant ships and vessels lost averages at the very melancholy rate of one and a half vessel per day in each year."

To us, who know but little of naval matters, the plan seems feasible, and well worthy of a trial; we suppose there is some good reason why it has not been so well received in this country as Mr. W. reported that it had been in Russia, America, the Netherlands, and France. The chief objection that we heard urged against it was, that the air confined in ordinary cases between the decks, instead of floating a leaky ship, furthers its destruction, by forcing

up its timbers; but there is a wide difference between imprisoned air acting with immense elastic force from **WITHIN** a structure designed to resist pressure only from **WITHOUT**, and the same air disposed in safety tubes fitted to retain it.

One of the simplest and most efficient life-preservers that we have seen, was placed on the table here some few evenings since: it consisted of a calico under waistcoat made double, so that by a small tube it might be inflated; and calico, when wet, is found to be so far impermeable to air as to form an admirably efficient float.

The theatre of the Royal Institution (in form a semi-ellipse) was built on strictly scientific principles, and although one of the largest, if not the largest, in London, a more convenient one for the voice we have never proved, and hence we would warn Mr. Watson, and all others who may have occasion to address a public meeting there, from frustrating the principle by quitting the spot designed for the speaker, and coming into the centre of the circular portion, by which the rays of sound are reflected to a focus, producing a most disagreeable effect, and thus not only is science violated, but the speaker rendered much less distinct. However, we beg pardon; it is not our duty to give a lecture on sound, and for aught we know, it may be trenching on Mr. Faraday's subject for Friday evening next, viz. "Phonics."

Wollaston's New Microscope—Blake's Barometer—Specimens of Lichen, &c. &c.

In the library there was so much to be seen that we cannot pretend to enumerate all the natural and mechanical curiosities there assembled. The admirable microscope which Capt. Grover has had constructed after the plan and model of one designed by the late Dr. Wollaston, attracted our especial attention. For power, price, and portability combined, it is superior to any we have seen, and derives not a little interest from the circumstance of being the *first* made on Dr. W.'s plan; so that he who did so much for philosophy when living, may truly be said to have continued his assistance even from beyond the grave.

Capt. Blake's barometer for measuring heights, including thermometers, &c. is certainly a most convenient and

portable instrument. The cups, plates, &c. turned out of fig-tree wood, and varnished, are light, and as black as jet: they are very beautiful.

Among the botanical specimens we noticed various illustrations of the new genera into which the old genus (now order) *lichen* has been divided: various species of *ulva*, especially the eatable laver; and the *ulva marina* lately used for stuffing cushions, mattresses, beds, &c. which is stated to be soft, elastic, cool, and not infestible by vermin. What with the Berlin iron ornaments for ladies' heads and arms, (such as tiaras, bracelets, &c. some of which were shewn here as samples of exquisite workmanship) and sea-weeds and metallic springs, instead of down and feathers, for our best and softest cushions—a few ages hence our descendants may be disposed to regard as luxurious "Luke's iron crown, and Damien's bed of steel."

Monday, March 1.

Fullerian Medal.

The Duke of Somerset, as President, delivered, with an appropriate speech, the Fullerian gold medal to William Haseldine Pepys, Esq. and all who are acquainted with this gentleman's chemical investigations (and who is not?) will agree that the award could not have been made to one more worthy of such an honourable distinction.

Friday, March 5.

WHITLOCK NICHOL, M.D. V. P.
IN THE CHAIR.

Transmission of Sound.

The transmission of musical sounds through linear conductors, and their subsequent reciprocations, was this evening very ably descanted on by Mr. Faraday, from materials furnished by Mr. Wheatstone.

We need hardly enter into a history of acoustics to evidence the belief formerly entertained, that air was the only medium through which sound could be transmitted, and the doctrine that all solid bodies through which it passed allowed the transit only on account of the air contained in the pores within them; or the modern experiments by which, on the contrary, it has been

proved that solid bodies are of all others the best fitted for its transmission. Some substances, however, transmit sound much more speedily than others, and this, which is attributed to their specific elasticity, would seem by experiment to be in the ratio set down in the following table:—

	Feet per Second.
Tin	7,800
Silver	9,300
Copper	12,500
Glass and Iron nearly equal	17,500
Various Woods ... from	14,000 to 18,000
Tobacco Pipe	10,000 to 12,000
&c. &c.	

The transmission of sound through solid substances has, however, long been popularly familiar. We have often seen persons put the poker to the tea-kettle to ascertain if the water nearly boiled; in the same way that physicians apply the stethoscope to a patient's chest. In like manner it has been observed, that, during an engagement, the discharge of artillery, which was wholly inaudible under common circumstances, could be distinctly heard at twenty-five miles distance, if the ear were applied close to the earth; and the tale of St. Paul's clock striking thirteen being heard by the sentinel at Windsor, whether true or false, is an apposite illustration. Miners avail themselves of this principle, to ascertain if any other miners are approaching them, by scattering sand on a drum-head, which, by the nodal lines, will indicate the direction in which, as in coal-mines, fellow-workmen approach, or, as in warfare, the countermine is being made.

The *microphone* is a beautiful instrument, constructed on similar principles, which is so delicate in its indication that it will point out in *what part* of a piece of machinery, *e. g.* a large steam-engine, even a screw may be loose, which could not otherwise be ascertained. Mr. Faraday's chief object, however, was to shew to what extent sound could be thus transmitted, and then rendered audible by reciprocation. Experiments have proved it to pass for several hundred feet, and philosophers the most acute, *e. g.* Wollaston and Herschel, have found no reason why it should not be indefinitely continued, if the conducting rods were properly insulated; and caoutchouc being the worst conductor of sound known,

is consequently the best insulator. Rods thus circumstanced, of many feet in length, were extended out of the skylight of the theatre, and through its floor into the rooms beneath, and sounds scarcely audible, or not at all so, (such as tapping at the end of the rod, playing on the piano, the sounding-board of which was in juxta-position with one end of the long rod in a distant place, &c. &c.) were heard as distinctly as if close, *i. e.* if the ear or teeth were applied to the end of the rod; or, what is very curious, if another sounding-board, as of a guitar, were placed at the other end, its reciprocation would render the sounds audible to 500 persons or more at once; and we suppose there were nearly that number present.

The proposed practical application of these principles were, first, to convey into any room chosen, the musical sounds produced at any distance, without being audible in the intermediate spaces; thus a band, or an orchestra, need not be in the apartment where the audience are assembled. Secondly, to multiply the sound of one instrument, by having several or many conductors, each with a reciprocatory sounding-board, so that a single performer might execute a concert. Thirdly, to convey sounds, and probably the inflections of the human voice, to any distance, by insulated conductors, stretching from town to town; which apparatus may be called a *telephone*;—and it was observed that, in *theory*, the transmission from London to Edinburgh would not occupy more than two or three minutes; so that, however far our friends may travel, they would always be within our call.

—

In the library were some very fine specimens of rock crystal; a model of Capt. Lehat's improved hanging rudder; some beautifully preserved Ceylonese snakes (Cobra de Capello, whip-snake, coral-snakes, &c.), sent by Mr. Hume; a curious old manuscript copy of the Venetian laws; a manuscript copy of the Life of Christ, in English, of the time of Wickliffe; various valuable old prints; a copy of the only whole-length figure of Pope ever taken; a portrait of the late Gilbert Burnett, Bishop of Salisbury, with a curious antique emblazonment of the family arms formerly in his possession; also an admirable

engraving presented to the Institution, by Colnaghi, of one of its most highly-talented members—Mr. Faraday.

WESTMINSTER MEDICAL SOCIETY.

Saturday, March 6.

DR. A. T. THOMSON IN THE CHAIR.

Vaccination.

DR. GREGORY this evening called the attention of the society to the subject of vaccination. His principal object was to record such facts as his late experience had furnished him with, on which the members of the society might reason for themselves; but he was at the same time ready to acknowledge that in his opinion these facts tended to confirm a principle long hinted at, and now beginning to attract much attention,—a principle which he begged leave to designate as *the decadence of vaccine influence*.

A school-boy was recently admitted into the Small-Pox Hospital labouring under a severe attack of fever, with excessive prostration of strength. He was the inmate of a house in Somers' Town, in which small-pox was raging. The suddenness of the attack, and the character of the symptoms, sufficiently shewed that the source of fever was the variolous poison. A very imperfect attempt to develop the variolous eruption was perceptible on the third day of fever. The patient is rapidly convalescing. He had been regularly vaccinated when an infant, and had two good scars. Dr. Gregory remarked that in the constitution of this boy vaccine influence was in full activity, and though it could not prevent variolous fever, it effectually checked the development of variolous eruption.

Dr. Gregory next adverted to the comparative rarity of small-pox after vaccination between the fifth and the fifteenth year of life. Of 202 cases of small-pox in unprotected subjects admitted into the Small-Pox Hospital in 1829, 68 were under, and 134 beyond the age of 15. The former were to the latter, therefore, as 1 to 2. Whereas of 109 cases of small-pox occurring to vaccinated subjects during the same year, only 13 were under, and 96 be-

yond the age of 15: here the proportion is as 1 to 7. This difference seems inexplicable on any other principle than that of decadence of vaccine influence.

The phenomena of revaccination tend, in a great degree, to support the same notion. Dr. Gregory has found that it is scarcely possible to communicate cow-pox a second time, when the interval between the primary and secondary vaccination is less than ten years. After that period it is comparatively much more easy to produce a secondary vesicle; and in a considerable number of cases, where 20 or 25 years had elapsed, revaccination had produced vesicles sufficiently perfect to appear capable of communicating the disease. Dr. Gregory, however, had never tried the experiment of inoculating with such secondary lymph, having always an abundant supply of primary.

The discussion which ensued was very long and animated, branching out into almost every interesting and obscure point connected with the theory and practice of vaccination. We can only allude briefly to the principal of them.

DR. BARRY considered it very doubtful how far the lymph of a secondary vaccine vesicle was capable of communicating the genuine disease. He thought there might be something mulish in the nature of secondary cow-pox, by which the reproduction of the disease would be prevented. He considered that no harm, and some benefit, might accrue from ascertaining the fact by experiment, and recommended Dr. Gregory to make the trial, which the doctor promised to do.

MR. DUNCAN, in the course of some very interesting observations on the practice of vaccination and revaccination on the continent of India, took occasion to advert to the origin of the Indian lymph, which was first brought to Bombay from Bussorah. Dr. Gregory remarked that this lymph was derived from the horse, and not from the cow; that it had originally been supplied from Vienna; whence it had been propagated by the arms of successive children to Constantinople, Bagdad, Bussoran, and Bombay. India, therefore, had been equinated, not vaccinated. Dr. Barry thought there must be some mistake here, or otherwise the people of India had been shamefully deceived. It was, he said, to the popular superstition of the Hindoos in favour of the cow that the

introduction of vaccination among the Indian nations had been mainly attributable. Mr. Duncan, whose opportunities of observation had been so great, denied this, remarking that the term cow-pock was nowhere received in India, but that the natives gave it the name of foreign pock, English pock, but most commonly of the charm-pock, from the charmed life which it appears to bestow.

The CHAIRMAN adverted to the circumstance of the increased frequency of small-pox after vaccination in the practice of the present day, and inquired of the members how far this might be attributable to the virus becoming more mild, and consequently less active, as it successively passed through so many human bodies. Dr. Gregory was disposed to throw aside such a notion altogether: he even thought that successive inoculations might tend still further to assimilate the vaccine virus with the human constitution, and thus to diminish the chance of such frequent failures hereafter.

DR. STEWART directed the attention of the members to Dr. Ferguson's proposal of a double system of inoculation, whereby cow-pox and small-pox might be made to exert a simultaneous but modifying influence on the body. Dr. Gregory objected to this practice, first, because if found successful it would speedily put an end to the pure cow-pock; and, secondly, because the lymph contained in a cow-pock vesicle when the system was variolated, was not to be trusted to for the propagation of genuine cow-pock. He appealed to some experiments performed by Dr. Adams, at the Small-Pox Hospital, in support of this opinion. Dr. A. T. Thomson was disposed to question the accuracy of these experiments, and saw nothing to prevent the cow-pock vesicle continuing to secrete unadulterated lymph, even though the constitution was under the influence of small-pox. Dr. Gregory remarked that this question involved the doctrine of the mutual relation of small-pox and cow-pox, one of the most difficult in the whole range of pathology.

The CHAIRMAN enquired whether the return of the human body to variolous susceptibility after vaccination could be judged of by any adequate signs; whether the scar could be trusted to, or the length of interval?

DR. GREGORY stated, in reply, that he had no reason to think the principle of vaccine decadence was universal, but he knew of no means of ascertaining the exact state of the body with regard to its susceptibility of variola, except the practice of revaccination; and it was even a matter of doubt, deserving of investigation, whether the susceptibility of secondary cow-pox indicated a like susceptibility of small-pox. He was disposed to give up altogether any reliance on the aspect of the scar. In answer to a question from Mr. Chinnock, Dr. Gregory stated that he had met with but one case of small-pox after revaccination: this occurred at the Small-Pox Hospital in 1829. The patient had been vaccinated in early life, and again at the distance of ten or twelve years, the secondary vaccination running a modified course.

DR. AYRE professed his belief in the correctness of that principle which ascribed to the cow-pox a decaying influence as life advanced, and instanced some cases in his own family, which seemed to give countenance to the notion. Mr. Chinnock considered that this principle, designated by Dr. Gregory as the decadence of vaccine influence, had some foundation in nature, and was deserving of further investigation. He wished Dr. Gregory to concentrate in a few words his practical suggestions, and to state what were the circumstances under which it became a medical man to recommend revaccination.

DR. GREGORY remarked that the question was too intricate to be answered in a few words, and too important to be entered upon at that late hour, (ten o'clock having struck).

The discussion here terminated; and it was remarkable, that during its whole course, not one single member stood up to advocate the old Jennerian doctrine of the uniformity and persistency of vaccine influence.

Difference between James's Powder and the Pulvis Antimonialis of the London Pharmacopœia.

Before dismissing the society, the Chairman made a few observations on the composition of James's powder, and of the pulvis antimonialis of the Pharmacopœia. He remarked that Dr. Pearson and Mr. Phillips had asserted that these two preparations were the

same, while the latter gentleman added that both were equally inert. Dr. Thomson, on the contrary, had found James's powder to be a very efficient diaphoretic, while in chemical composition it differed essentially from the other, inasmuch as it contains a soluble salt of antimony. If equal quantities of pulv. antimonialis and James's powder be boiled in water, and a stream of sulphuretted hydrogen afterwards passed through the fluid, it will throw down a yellow precipitate from the latter, but leave the other undisturbed.

MEDICAL GAZETTE.

Saturday, March 20, 1830.

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MEDICAL ATTENDANCE ON POLICEMEN.

Our remarks on the proposed plan of affording *cheritable* relief to the policemen of the metropolis, have not been without effect. The attention of our brethren has been roused, and we have reason to think that the obnoxious measure will prove abortive. Two Dispensaries at the west end of the town had come to terms with the Commissioner—namely, the Westminster and the Mary-le-bone; and in both the arrangement was the same. A certain sum was subscribed in behalf of the police, on the condition of being entitled to have one patient, belonging to a particular division, constantly on the books, for every guinea and a half that was so contributed. At the Westminster Dispensary, for example, the amount was thirty guineas; for which, twenty policemen were allowed to be in constant attendance. This subscription is *apparently* liberal, inasmuch as any private individual is permitted to have a patient constantly on the books for a guinea per annum. But, as we formerly pointed out, this extent of privilege is allowed simply because it is made use of by very few; and

the subscriptions of those who send no patients balance the overplus expense on those who send several. But with regard to the police it is totally different; for so far were the parties concerned from not availing themselves of their privileges to the full extent, that, at the Westminster Dispensary, there were already, at the end of three weeks, twenty-five patients in attendance—whereas twenty was the maximum to which they were entitled; and we understand that at the Mary-le-bone Dispensary, when there were not sick enough on the division contracted for to make up the full number of patients, they were actually sent from other divisions—an encroachment which was very properly resisted. We have said that a certain number were in attendance at the Gerrard Street Dispensary; we are happy to say that now there are none. Most of the dispensaries are under the control of a committee, who meet once a month, and with whose decisions the governors at large seldom interfere except in particular cases. Since our former article was penned, a general meeting has been held, and in consequence of a majority of those present viewing the matter in the same light as ourselves, the resolution of the committee on this point has been negatived—the money returned to the parties—and the whole arrangement annulled. This result, which we are happy in having contributed to effect, is the more important as it affords a precedent for the imitation of the governors of the Mary-le-bone Dispensary at their next general meeting. We strongly recommend you to value the interests of the police, and to follow the example of the Westminster Dispensary.

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The managing Committee of that institution agreed to receive the policemen, at least so we are told, without consultation with the medical officers. Did these gentlemen really believe that,

in consenting to this measure, they were relieving the necessities of the *sick poor*, for whose benefit the institution was originally designed, and is *still supported*? We hope some active governor of that excellent charity will look to this.

We have been informed that one of the physicians to the charity has refused to give his professional attendance to the policemen, as not falling under the description of persons for whose aid the institution was formed. Some of his colleagues, however, take a different view of the case, and give their advice to the police as well as to the necessitous poor. We would desire to know, from any governor of that institution, what is the wording of the form of admission for patients; and whether it does not imply, either in spirit or in letter, that the individual applying is *a real object of charitable relief*?

We sincerely hope that government will reconsider this part of their arrangement with regard to the new police, and not sanction what we fear must be stigmatized as a most unwarrantable application of the resources of charitable institutions; a motive which may, perhaps, influence those who would look upon our objections with indifference, if they merely rested on the injustice of withdrawing from the general practitioners of the metropolis a portion of that hard-earned emolument to which, of all who derive their individual support by labouring for the public good, none are more fully entitled.

ANATOMICAL BILL*.

We hear that a bill is to be brought into parliament by Lord Calthorpe for the purpose of legalizing dissection, and that the proposed measure will be almost entirely limited to this simple provision. We fear that at present

there is little prospect of any efficient mode of supplying subjects being adopted, or of the dissection of murderers being discontinued. This last proposal, indeed, is so strongly objected to by the Lord Chief Justice of the Court of King's Bench, that its introduction into any bill would risk its entire rejection, as probably the peers would not vote against so highly-respected a Judge on a point of law.

HOSPITAL REPORTS.

HOTEL DIEU.

M. Dupuytren's Opinion of the Comparative Advantages of Union by the First and Second Intention after Amputation.

DURING the past winter many cases of amputation, either of the upper or lower extremities, have occurred at the Hotel Dieu, in Paris. These operations have afforded M. Dupuytren an opportunity of explaining his views on the comparative advantages and disadvantages of immediate and secondary union. He remarked that the older surgeons were not acquainted with the difficulties which induce operators of the present day to hesitate between these two methods. They were not in the habit of preserving integument enough to cover the bones, and therefore never thought of immediate union. This method only led to the formation of a weak and imperfect cicatrix after suppuration. At a later period the healing was conducted more methodically, but still was delayed by the interposition of substances more or less irritating between the lips of the wound; thus causing suppuration to a greater or less extent. The idea of placing the edges of the wound in apposition, and producing immediate cicatrization, is due to Benjamin Bell, who practised it in 1772, while it was converted into a general principle by Alanson, in 1779. This method was adopted in an exclusive manner in England, and received in Germany with enthusiasm, under the sanction of Graefe. In France it met with more opposition, but having been adopted by Desault, and practised by many of the military surgeons, came to be regarded as preferable to the old method of union after suppuration. Nevertheless, it is only by the result of trials on the great scale, and by a rigid comparison of cases, that this question

* See the Erratum at the end of the present number.

can be decided; and this mode of inquiry is far from being favourable to union by the first intention.

M. Dupuytren is convinced that more cases of amputation are lost when immediate union is attempted, than where suppuration is allowed to take place. He has had occasion to compare the results, *en masse*, and these have led him to the conclusion just mentioned. Of thirty amputations of various members, in which union by the second intention was practised, only six died. Of twenty-nine others, where union by the first intention was attempted, nine died. Similar observations have several times been made by M. Dupuytren. These results have generally been obtained in individuals who have been operated upon for diseases which had produced copious and long-continued suppuration, as disease of the joints, caries, large ulcers, a set of cases such as are wont to be met with in civil hospitals. It is impossible to change suddenly a long-continued habit of suppuration without danger. Inflammations of the viscera, more or less marked, with or without the formation of matter, have very frequently followed. The drains that have been established in such patients some time after the operation, have not succeeded in saving them, and too often a fatal result has followed where it might have been arrested by a different mode of dressing the stump. Phlebitis, so often a fatal disease, according to the experience of M. Dupuytren, is more common after union by the first intention than when suppuration has been allowed to take place.

It is acknowledged that the success of military surgeons has been great in practising the method of immediate union, but it is held that the class of patients, and of injuries with which they have to deal, are essentially different from those met with in civil life.

The result of all these considerations has led M. Dupuytren to the determination of only employing immediate union in a small proportion of cases, returning in general to the old mode of dressing the wounds; that is to say, not allowing them to heal till after suppuration. This he accomplishes by introducing a certain quantity of fine charpie between the lips of the wound, which are approximated to within a short distance of each other by adhesive straps: the charpie is only removed when it is detached by the formation of matter.

By this method he thinks the suppuration to which the patient has been habituated, not being suddenly arrested, prevents the occurrence of subsequent mischief.—*Journal Hebdomadaire*.

HOSPITAL OF LYONS.

Operations for the removal of various Deformities.

CASE I.—Deformity of the Nose cured by operation.—M. Dupuytren performed an operation in 1823, with a view of remedying the absence of the partition between the nostrils. A flap of integument detached from the upper lip, and turned with care so as not to interrupt the circulation, was adapted to the extremity of the nose, so as completely to cover the void previously left by disease. During the first few days every thing promised the most favourable result; but soon, in consequence of the retraction of the parts, the lips and nose became approximated, and the movements of the former were thus impeded. From this attempt no benefit was derived, and M. Dupuytren did not choose to hazard any farther operation. M. Gensoul, of Lyons, was more hardy, and succeeded. His account is as follows:—I plunged the point of a very sharp bistoury obliquely to the right of the basis of the flap attached to the lip, and divided it in nearly its entire depth and height. I then did the same on the left; and these two oblique incisions meeting at their summit in the thickness of the lip, the flap was detached. It represented the figure of a wedge. I removed it, and having thus reduced the wound of the lip to a simple incision, by this loss of substance, I re-united it by means of a pin and waxed thread. The nose, which was much pulled down, being no longer fixed, was elevated by the elasticity of its cartilage. The advantage thus gained has since continued.

CASE II.—Double Hare-lip, complicated with great projection of the middle portion of the Upper Jaw.—In a girl, 13 years of age, there existed a congenital double hare-lip, with projection of that part of the upper jaw which contains the incisor teeth. The middle flap having been dissected from its adhesion to the bone, and the four teeth which this portion of the jaw contained being removed, M. Gensoul then seized the

projecting piece of bone with a large pincers, and pushed it down to its proper level by force. By this means the bone was broken at the point where it was on a level with the small molares, and sustained solely by the mucous membrane lining it on either surface. It was kept in this new position, and the parts healed favourably; the aspect of the face, previously so much deformed, being thus rendered natural.

CASE III.—Loss of a large portion of the left cheek by Gangrene, restored by Operation.—A woman, in consequence of gangrene of the left cheek, had a large portion of both jaws exposed. The second incisors were distinctly seen, as were the canine, one of the large molares, and the whole of the small, making in all nine teeth. The teeth and alveoli had been thrown outwards during the healing process, by which the movements of the jaw had been impeded, and ankylosis of the articulation produced—causing a deformity equally horrible and inconvenient, as it prevented mastication. M. Gensoul first cut all the points of attachment of the cicatrix and integuments, and then removed, by means of a chisel and mallet the projecting portions of bone; after this he dissected about two inches of the integuments of the upper part of the neck, and one inch of those of the cheek. He then proceeded to approximate the skin of the cheek with that of the neck, and kept them in apposition with sutures supported by straps. The deformity was thus removed, excepting that a small salivary fistula remained; but this was easily covered.—*Journal Hebdomadaire*.

IMMOBILITY OF THE JAW.

To the Editor of the London Medical Gazette.

2, Alfred-Street, Bath, 1830.

SIR,

In reading Dr. Mott's case of immobility of the jaw (successfully treated), I find the following paragraph:—

"As no force which I could exert would enable me to open the mouth, I was prepared to apply the mechanical principle of the screw and lever. For this purpose we had prepared an instrument composed of two steel plates," &c.

If I rightly understand the New York Doctor, he wishes it to be understood that he invented the instrument of which he gives

a drawing (in your February number, 1830), and with which he treated the case successfully. I have not the least desire to detract from the merit of any gentleman's inventive powers, but I cannot resist sending you what I consider the original of his invention, and I can pledge myself it has been in my possession thirty years, and I know not how long before that period in the possession of my late master, Dr. Mingay, of Thetford, Norfolk (England), and his father.

I shall be obliged by your returning the instrument at your earliest convenience; and apologising for this trouble,

I am, Sir,

Your obedient servant,

WM. JAS. LONG.

[The drawing of the instrument used by Dr. Mott (see Gazette, No. 117) is an exact representation of that sent to us by our Bath correspondent.—E. G.]

HUNTERIAN MEDAL.

We understand that a gold medal, of the value of ten guineas, has been placed at the disposal of the Council of the Hunterian Society, for the best essay on any subject selected by them; and that they have chosen, for the current year, "The Nature and History of Tubercular Formations." Essays must be sent before the 1st of December. The merits of the essays are to be adjudged by the Council, and the prize is to be presented at the Anniversary Meeting in February.

NOTICE.

We have this week given two of Mr. Lawrence's Lectures, and shall do the same in our next number, in order to complete the subject of Syphilis in the present volume.

BOOKS RECEIVED FOR REVIEW.

Observations on the Disorders of Females connected with Uterine Irritation. By Thomas Addison, M. D. Assistant Physician and Lecturer on the Theory and Practice of Physic at Guy's Hospital.

A Dissertation on the Influence of Heat and Humidity. By James Murray, M. D.

ERRATA.

In Mr. Guthrie's Lecture, in our last number, p. 762, col. 2, for "the bill is open to the imputation of harm—said," &c. read "open to the imputation of having said," &c.

In the Extracts from the Lancet and Gazette in our last number, there ought to have been asterisks between the two sentences of the second specimen, because in neither journal do they follow each other continuously. In part of our edition of these extracts, the intervening sentence was given in full, but afterwards it was omitted, as being lengthy, and not essential to the meaning.

W. WILSON, Printer, 57, Skinner-Street, London.

THE LONDON MEDICAL GAZETTE,

BEING A
WEEKLY JOURNAL

OF
Medicine and the Collateral Sciences.

SATURDAY, MARCH 27, 1830.

LECTURES ON SURGERY,
Delivered at St. Bartholomew's Hospital,
BY WILLIAM LAWRENCE, F.R.S.

LECTURE XXVII.

Secondary Syphilis—Mr. Carmichael's Divisions: Scaly, Papular, Phagedenic Venereal Diseases—Affections of the Bones and Joints—Syphilis in Infants—Cases in illustration.

I BELIEVE, gentlemen, in my last lecture I omitted noticing one point to which I intended to have adverted—namely, the question whether a syphilitic bubo can occur without any primary sore?—whether the glands in the groin can be affected with syphilis, except in consequence of the previous existence of a primary sore on some part of the genital organs? This is a point which is not yet decided. I can only state to you my own belief—which is, that they may be so affected. I mean to say, that we do occasionally see instances of chronic indurated swellings of the glands of the groin, in individuals in whom we cannot trace any other cause for the occurrence—in individuals who have exposed themselves to the possibility of contracting syphilis; and in whom the employment of mercury by friction, on the inside of the thighs, very often contributes to the dispersion of such swellings. I fancy that the general belief is rather on the other side—that a swelling of the glands of the groin, occurring independently of the circumstance described, is not to be regarded as the result of infection; and the point is to be considered altogether as a doubtful one.

In my last lecture, I enumerated and described to you the various phenomena of the disease which constitute what are called *secondary symptoms* of syphilis, or *lues venerea*. Now all these do not occur in one individual, nor do they occur indiscriminately; but we are in the habit of seeing

certain of these affections combined together. They form certain groups, which exist either in conjunction or succession to each other, in particular instances. They do not take place accidentally—they do not seem to be like accidental coincidences; but we are in the habit of seeing that certain appearances are frequently combined together, and that some others do not exist simultaneously, so that we can draw out a sketch of certain conjunctions or groups of symptoms that occur in particular instances.

In a former lecture I had occasion to observe, that Mr. Carmichael, of Dublin, conceived that certain secondary symptoms could be connected with certain primary sores as their source; that a certain train of secondary symptoms might be referred to each particular sore; and that there was so much regularity in the conjunction of these phenomena, that he conceived himself authorized to establish the existence of some four distinct species of venereal disease, to which he has assigned names. I may just mention the divisions he has adopted, and the names he has given to them; for certainly we do observe that particular symptoms, both primary and secondary, are frequently conjoined. Inasmuch as that is the case, I think we may very properly adopt at all events some of the names which Mr. Carmichael has given to these conjunctions, without embracing, in the full extent, his notions respecting the diversities of poison which produce them.

The *indurated chancre*—that sore which has been particularly described by Mr. Hunter, and, in consequence of his description, since regarded by the profession as more particularly deserving the name of syphilitic primary sore, or chancre:—the indurated chancre is commonly followed by scaly eruption, by the excavated and tawny-coloured ulcer of the tonsils, by pains in the shafts of the long bones, and by nodes formed on their surface. This combination of symptoms Mr. Carmichael calls the *scaly venereal disease*; and it is the combination of symptoms which

has been more particularly described by Mr. Hunter, in his work on the Venereal Disease, and which subsequently to his description has usually been assumed as constituting the true or regular venereal disease, or syphilis. Mr. Carmichael considers that this form of venereal disease is particularly benefitted by the administration of mercury—in fact, that the employment of mercury so as to affect the system, is the best treatment of it, whether in its primary or its secondary shape. I should have no hesitation in agreeing with him on this practical point—namely, that the indurated chancre, the scaly eruption, the excavated ulcer of the tonsil, and the nodes on the shafts of the long bones, with severe nocturnal pains, are symptoms that do indicate the use of mercury, and are in all instances benefitted by it; and the removal of which, if not absolutely requiring, is at all events much accelerated, promoted, and advanced, by the employment of mercury so as to affect the system. We are not, however, to lay down the use of mercury, even for this form of the disease, in the same positive and exclusive manner in which heretofore it was regarded as a remedy for syphilis. The recent inquiries into the history of syphilis have demonstrated, as I have already informed you, that all forms of the venereal disease may get well without the use of mercury; that syphilis is not that uncontrollable disease which proceeds to destroy the part in which it is seated, and then goes on from one part to another with a progress essentially destructive throughout, so as to destroy the life of the individual. These inquiries into its history have shewn that this notion is erroneous, and that the disease may go through its course, and wear itself out, without the employment of mercury at all. We are to consider, therefore, that though mercury is the best remedy with which to treat the form of the disease now mentioned, it is not so essential that you should persevere in its use at all hazards, whatever effect it may produce on the system. Mercury acts, as I have already told you, as a kind of poison on some individuals, and produces very injurious effects. Heretofore it has been considered better that individuals should bear these effects rather than subject themselves to the evil of allowing the syphilitic disease to go on: but now, as we have ascertained that the syphilitic disease will not produce those destructive consequences, we need not regard it as imperatively necessary, in every form of the venereal disease, to persevere in the use of mercury, when its operation is essentially injurious to the individual. Under these circumstances, even in this form of the disease, we should intermit the use of mercury; leave it off for a time, allow the bad effects produced by it to subside, and then resume it again; employing it in smaller quantities than we had before deemed neces-

sary. We derive this advantage from the inquiries that have of late years been made—namely, that we need not expose the patient to the risk of those prejudicial effects which mercury is frequently capable of producing; we need not persevere in the remedy, if these bad effects result, but may lay it aside, and trust, at all events for the time, to the employment of other means.

The second form of venereal disease described by Mr. Carmichael, is what he calls the *popular venereal disease*. I should have mentioned before, that Mr. Carmichael characterizes the disease chiefly by the form which the eruption assumes. He considers that the eruption is the circumstance most characterized in the natural history of the affection, and we certainly find this to be true in other cases—as cow-pox, small-pox, and so forth.

He says that the popular eruption follows the simple superficial venereal sore, which is unattended with induration of the basis or elevated edges—that it sometimes follows gonorrhœa—and also that it follows a primary affection which I have not yet mentioned—that is, an excoriation of the prepuce and glans, with a puriform discharge. This is a kind of primary affection which leaves us in some doubt whether it ought to be referred to gonorrhœa or to syphilis. We find, however, occasionally, that the lining of the prepuce and the covering of the glans penis become inflamed, red, thickened, excoriated, superficially ulcerated, and produce a thin, purulent, and generally stinking discharge. This is sometimes called *gonorrhœa præputii*—gonorrhœa of the prepuce; and with that affection we not uncommonly find conjoined a superficial sore at the reflection of the prepuce over the glans penis; at all events we find a considerable excoriation in that situation, without being able, in every instance, to say that there is an actual ulcer. Now these three forms of the primary affection—a superficial sore without elevated edges or indurated basis, the *gonorrhœa præputii*, or inflammation and excoriation of the prepuce and glans with a purulent discharge, and gonorrhœa, properly so called—these three forms of primary affection, according to the experience of Mr. Carmichael, are commonly followed by papular eruption of the skin; by inflammation of the mucous membrane of the fauces, with superficial ulceration; by peculiar and severe pain in the joints and in the limbs, without swelling of the periosteum or bones, or of the joints themselves; and with considerable pains in the chest and back. The papular eruption is a very acute inflammation of the skin; there is the formation of a number of pimples, of a bright red colour—that is, it consists of numerous and minute patches of active inflammation; and when these exist in a con-

siderable quantity all over the body, you will not be surprised that such an eruption is attended by considerable disturbance of a febrile character; that there is a full pulse, pain of the head, a white tongue, thirst, disturbance of the digestive organs; and that, in conjunction with these symptoms, there is often considerable pain of the chest, limbs, and joints. This, in fact, is rather a more active inflammatory disturbance of the system than that which occurs in the scaly eruption; though I may observe to you, that the appearance of the constitutional symptoms of syphilis, whatever form they may assume, is usually preceded by more or less of a febrile and general constitutional affection.

The symptoms that I have just mentioned to you, of course require pretty active antiphlogistic treatment; sometimes venesection—at all events active purgatives, the administration of saline and antimonial medicines afterwards, low diet, and rest; and they neither require nor are they benefitted, in the active inflammatory stage, by the employment of mercury. Indeed this papular venereal eruption will go through a certain course, much like the other active inflammations of the skin—as the small-pox, measles, &c. The pimples are commonly vesicated, or form a little pus at the point. The inflammation then subsides; the vesicles or pustules that have been formed, dry up; a little desquamation takes place, and the inflammation goes off entirely. You have a succession of these pimples, or patches, forming in various parts of the body; so that while some are declining, others are proceeding to vesication, or the formation of pus. However, the progress of the complaint ultimately leads to a natural cessation, and the eruption comes to an end of itself, even independently of the employment of any particular remedies. You mitigate the severity of the symptoms, and bring them to an end more speedily, by the employment of antiphlogistic means, suited in their activity to the state of the symptoms. There is no occasion for the employment of mercury in these cases, except towards the decline of the affection; and then you sometimes hasten the termination of the complaint by mercury—by blue pill, or Plummer's pill, in moderate doses. This form of the disease does not, like the preceding, require you to begin with the active administration of mercury. I may observe, however, that when iritis occurs, as it frequently does, in connexion with the papular eruption—and as it also frequently does in connexion with the scaly eruption of the skin—it usually requires the active administration of mercury for a short time. This is a point, however, I shall have occasion to advert to more particularly when we come to speak of affections of the eye.

A third well-marked form of venereal

disease, is that which Mr. Carmichael calls *phagedenic venereal disease*. Where the primary ulcer has a phagedenic character—where the affection of the skin in the secondary form consists in tubercles, which proceed to ulceration, and which form ulcers possessing also a phagedenic character, spreading by a phagedenic margin—where the sore throat is of the same character, and exhibits phagedenic ulcers, more particularly at the back part of the pharynx—and where there are troublesome and obstinate affections both of the bones and joints. These affections, both primary and secondary, are often attended with very considerable pain—the destruction of the parts by phagedenic ulceration is always a painful process, and, generally speaking, the suffering in this affection is very considerable; so that it wears out the strength of the patient and debilitates the constitution. These affections also shew a great tendency to relapse; they appear again and again. Some of the worst cases of syphilitic affection—those in which the powers of the system are most reduced, and where we experience the greatest difficulty in conducting the patient to a cure—are examples of this form of the disease.

I have already mentioned to you generally, that mercury is not a proper remedy in cases of phagedena; that the employment of mercury usually exasperates the affection, whether it be in the primary or secondary form; and therefore we are not to think of employing mercury so as to affect the system generally, in the phagedenic variety of the venereal disease. I think there can be no doubt that the prejudices that have been entertained of late against the use of mercury, have probably arisen, in a great measure, from the injudicious employment of it in cases of this description: under the notion that mercury was a specific remedy for syphilis, it has been commonly exhibited in phagedenic as well as other cases. Long courses of mercury have been employed in phagedena, because the disease did not yield. The symptoms, however, have been exasperated by the remedy, and have appeared again and again; mercury has been had recourse to as often; and thus, partly by the serious and painful nature of the disease itself, and partly by the injudicious administration of this most powerful remedy, the patient has been brought to a state of great exhaustion, and no doubt, in many instances, life has been lost in consequence.

In the phagedenic form of venereal disease, we generally have recourse to the employment of narcotics, for the sake of soothing the severe pain which accompanies it. We use conium, hyoscyamus, opium, and Dover's powder; but when the suffering is very considerable, I believe the general ex-

perience of the profession is, that opium is the only remedy on which we can rely. When we use it in cases of this kind, we find it necessary not merely to administer a single dose of the opiate at bed-time, but to employ it at regular intervals, so as to keep up a continued effect upon the system. A grain of crude opium, or five grains of *pil. saponis c. opio*, may be administered under such circumstances every eight, six, or in bad cases every four hours. If the symptoms do not require this free administration of opium, we may give a dose of Dover's powder—ten or fifteen grains at bed-time, or five grains of the *pil. saponis c. opio*, repeated perhaps once or twice in the course of the day. In conjunction with this, we may find advantage in the employment of sarsaparilla. If sarsaparilla possess any virtue, I think it must be in cases of phagedenic venereal disease. It is in those instances in which the general powers are most considerably depressed, that we find the efficacy of sarsaparilla most clearly exhibited. Although mercury employed *generally*, is prejudicial in the phagedenic disease, the same objection does not, in my opinion, exist to its employment *locally*; and, in fact, I do not know, under many forms of this affection, any application that is so advantageous as the employment of mercury locally. The black wash, the yellow wash, and perhaps more particularly the cinnabar fumigation, may be used; the latter especially is an eligible form in many instances of obstinate and serious phagedenic ulceration of the fauces, where indeed you cannot employ mercury in any other way. To the intractable phagedenic ulceration of the skin, which is very common, the yellow wash is a useful application.

Now it has happened to me sometimes to see, that the cinnabar fumigation to the throat, employed simply with a view to the local influence of the remedy on the ulceration there, has caused copious salivation; and I must observe, that in many instances where I have seen this, I have found that the local disease in the throat, as well as in other parts, has proceeded very favourably; so that I would not lay it down as an absolute rule that mercury ought never to be employed in these cases, in reference to its general effect on the system. Indeed, these cases are so obstinate and intractable, that, sometimes finding we do not succeed by remedies that we consider from general experience to be the most suitable, we are obliged to resort to others. I have known the mode of proceeding which gentlemen have followed, who have had great reputation in their treatment of these affections, to be this:—At their consultations they have made it a rule, that where the patient had taken mercury and no benefit had been derived, they have said, you must change the

medicine—you must use sarsaparilla; and on the contrary, where these last means had been tried, and there had been no advantageous result, they have said, you must discontinue these and use mercury. Sometimes then we must use mercury internally in phagedenic ulcerations; but we must do so very cautiously, and employ it in small doses. We cannot lay it down as a precise rule, under all circumstances, that we must not carry it to the extent that is likely to affect the system.

Mr. Carmichael speaks of a fourth form of venereal disease, under the name of *pustular*; but he does not speak of this very confidently, as if he had fully established its existence; therefore I need not detain you with any observations on the subject.

Now, with respect to these three forms of scaly, papular, and phagedenic venereal disease, I think you will find that their progress and appearances bear out what Mr. Carmichael has described; and you will recognise those circumstances which prove that his description must have been founded on the result of actual observation. Yet I do not feel myself prepared to go the whole length that he has gone, and to say that there are so many distinct poisons producing certain effects, because there is not that constancy observed in the combination of symptoms that I have now mentioned, which we notice in other obviously distinct and well-marked affections of the body, such as measles, scarlet fever, small pox, and so forth. In the first place, we do not find that clear and constant distinction between the primary symptoms that Mr. Carmichael assumes. You sometimes see sores of a different character existing in one and the same individual; you may have superficial ulceration and indurated sore in the same person; you may have a sore, of which one part is indurated and the other not. The truth is, that perhaps the particular forms of ulceration in some measure depend upon the texture affected; so also you will see tubercular and scaly eruption occurring in the same individual; or you may see in the same person scaly eruption with phagedenic ulceration. The distinctions, therefore, that are laid down by Mr. Carmichael are only to be taken in a general sense, and not as being strictly true under all circumstances; but the practical rules of treatment he has laid down appear to me judicious, and I think you cannot have a safer guide in practice than the book he has written.

Now, having mentioned with approbation the publication of Mr. Carmichael, I would allude to another work on syphilis recently published, as well worthy of your attention. It contains a good collection of facts on the subject, judiciously arranged, while the various doctrines are discussed with much ingenuity, aided by considerable personal expe-

rience—I mean the Treatise on Syphilis, by Mr. Bacot*.

The affection of the meatus auditorius, the inflammation there with purulent discharge, is by no means a common occurrence in syphilis; it is only seen occasionally, in a strongly marked form. I have only chanced to see one instance where it was necessary, from other concomitant symptoms, to employ mercury; and I found the particular symptoms alluded to, together with the others that accompanied them, yield favourably to the influence of that medicine.

The affections of the bones and joints that occur in syphilis are often very tedious and very troublesome. In the majority of instances, I fancy what we call *nodes* are inflammations of the periosteum of the bones affected. Sometimes this inflammation is of an active kind, attended with external redness, and proceeding to the formation of matter; generally speaking, however, it is a more indolent chronic swelling, which becomes particularly troublesome, in consequence of the severe pain that accompanies it. Now, proceeding on ordinary principles, we should say under certain circumstances it might be benefitted by the application of leeches; and where the inflammation is more active, by the application of poultices. I do not know that in general we find the application of leeches of much use in these affections, though I would not venture to say that it is a mode of treatment that ought not to be employed in certain cases. When the disease has proceeded to the length of suppuration, we do not in general find that much matter is formed; but when tendinous parts, such as the periosteum, are concerned in inflammation that goes on to suppuration, we find a free division of such parts, so as to set them at liberty, produces more relief than any thing else. Thus, where we have tried other treatment and it has failed, we frequently find that an incision through the swelled and inflamed part down to the bone, will put an end to the patient's sufferings. In the more chronic forms of this affection, the application of mercurial plaisters externally may be advantageous, with the internal use of the pil. submuriat. hydrarg. comp.; but where these particular symptoms occur, as a consequence of syphilitic disease, we no doubt shall find the most effectual relief afforded by the employment of mercury, so as to affect the system.

Seeing the efficacy of mercury in many of these cases, I am rather surprised at an opinion which has been promulgated by many practical persons of late, namely, that the employment of mercury is injurious; that the nodes on the bones—this affection of the

periosteum, owes its origin to the employment of mercury as a remedy. I must acknowledge this is contrary to my experience. It appears to me that this particular form of the affection results as unequivocally from the syphilitic poison as chancre, sore throat, eruption, or any other symptom of the disease. But, besides this, in cases where there are nodes—that is, where there is inflammation and enlargement of the periosteum existing, independently of syphilitic affection, I do not know any more powerful mode of controlling them, after the employment of general anti-phlogistic means, than the use of mercury so as to affect the system.

The affections of the joints generally take place in the protracted states of syphilis; and some of the most troublesome of these cases occur in the advanced periods of the phagedenic venereal disease. You frequently find the synovial membranes of the large joints, such as the knee, inflamed, and sometimes swelled by a large effusion into their cavities—a condition accompanied by excessive pain. You might infer that the local abstraction of blood by cupping, or leeches, would be advisable in these cases; sometimes it does good; but you cannot rely, under such circumstances, on the abstraction of blood as a means of alleviating the affection, in the same way that you can do when the joints are in a state of inflammation from other causes. I think blistering is the most efficacious remedy in these cases; and this, I should also observe, is a remedy frequently resorted to with advantage in cases of obstinate affections of the bones and periosteum. In reference to these affections, both of the bones and joints, as well as to the pains in the limbs, and venereal eruptions, I may mention that, in many cases, much good is derived from the employment of the warm bath; and this is a remedy which may be combined advantageously with any of the other modes of treatment to which we are in the habit of resorting.

The affection of the testicle is not one of the more frequent forms of the syphilitic disease, though we see it occasionally. I do not know that this affection occurs particularly in conjunction with any of the forms of disease that I have stated, though I think we seldom see it alone. We usually find it occurring in conjunction with other secondary symptoms; and the co-existence of it with them tends to facilitate our diagnosis. The affection of the testicle consists in a moderate enlargement of it, with induration, and generally with irregularity in the surface of the swelling, so that there is a kind of knotted irregular enlargement; and there is generally considerable pain, but no very active inflammation, nor redness of the scrotum, which, however, is enlarged very considerably. I think that we find invariably

* See the valuable series of papers originally published by that gentleman in this Journal, vols. II. and III.

that this particular symptom is relieved most effectually by the employment of mercury.

The affection of the nose in syphilis, like that of the bones, has been considered more particularly of late, by those who have entertained strong objections to the use of mercury, to be an effect resulting from the employment of that substance. Now I believe it may be said, that nobody ever saw an affection of the nose arising in an individual who used mercury for other complaints; and I certainly have seen this disease of the nose arising as a symptom of syphilis, in individuals who have not employed mercury in any considerable quantity, so that we may say the same on this subject as we did with respect to the periosteum and bones. I cannot participate in the opinion that ascribes these to the mercury, although we may perhaps say, that this is one of those forms of the disease which might be aggravated or rendered more severe by the injudicious use of the remedy. I think in general, that the use of mercury does not do good where the nose is the seat of disease; and that sarsaparilla, and the local employment of mercury, such as corrosive sublimate, either in distilled or lime water, is the safest mode of proceeding.

With respect to *warts* as connected with syphilitic disease, we do not find it necessary to resort to mercury in their treatment. They are to be regarded in this, as in other cases, as the result simply of irritation affecting the parts in which they have arisen; therefore their treatment falls under the general rules applicable to these excrescences under other circumstances.

There is one other form of the venereal disease still remaining to be spoken of—that is, syphilis as it occurs in infants; and this is a form of the disease not arising in the way that the disease does in the adult, through the medium of sexual intercourse. Syphilis is communicated to infants through the medium of the circulating fluids of the mother. The syphilitic poison is conveyed to the child in utero, by the blood of the mother; and the child sometimes has the effects of the poison visible on it at the time of birth. More commonly the result of this affection becomes apparent a few weeks after birth—four, five, or six weeks, or even a longer period.

The affection as we see it in infants is very strongly marked; it is so peculiar, that, in my opinion, it cannot be confounded with any other. The source and nature of the disease appear to me equally clear and unequivocal: hence I must acknowledge that it seems to me very strange that Mr. Hunter, who appears to have seen many well marked and striking instances of it, should have put it down in that chapter of his work in which he speaks of diseases

resembling syphilis, but which are not syphilitic.

In the first place, this affection of children only arises where they are born of mothers that have actually laboured under syphilis; and the disease itself, in the infant, presents the strongest analogy to syphilitic disease as we see it in the adult. The disease which thus appears may be communicated from the child to a healthy woman who suckles it; and the disease thus produced in the woman is capable of affecting other individuals. And lastly—what I should have supposed would have been the strongest argument with Mr. Hunter in favour of its syphilitic nature—it is curable, and most easily and decidedly so, by the employment of mercury. That is Mr. Hunter's great criterion, in general, for deciding whether a complaint is syphilitic or not. If a disease gives way easily under mercury, he argues that it is syphilitic; if not, he argues that it is not syphilitic. Therefore this affection of the infant is one that would come under his idea of syphilis in all its circumstances: the origin of the affection, its nature, the way in which it can be communicated from one individual to another, and the mode in which it is cured—all concur in shewing that the affection is in its nature syphilitic.

Now we naturally ask, in the first instance, whether this affection in the child proceeds from the primary or from the secondary form of the disease in the mother. So far as my own opportunities of observation and inquiry have gone, I should say it is produced not by the existence of the primary, but of the secondary disease in the mother. I do not mean to say that the existence of the primary disease in the mother may not produce it; but, in the majority of instances, I think we find it seems to have owed its existence to the presence of secondary symptoms; and, in fact, the disease, as it occurs in the child, does not bear the character of the primary symptoms, but is analogous to what we call secondary symptoms in the adult. I remember an instance of a young female, about sixteen years of age, who was in this Hospital as a patient of mine, being far advanced in pregnancy—I think about six months—who had got obstinate chancres, for which I found it necessary to employ mercury so as to salivate her; and I did so very freely, yet it had no unfavourable effect on her offspring. I am not able to state positively whether she had, before delivery, secondary symptoms or not, because she did not continue under my inspection; but knowing that she was far advanced in the family way, and having found it necessary to use mercury, and keep her under its influence, I was interested in the case, and told her to bring the child, and let me see it a month after

birth. Accordingly, she brought the child at the time specified, and it was then perfectly well. I told her to bring it at the end of another month: she brought it, however, a fortnight sooner, and then it was poxed all over, from top to toe; and she herself had got a syphilitic affection of the throat, and an eruption on the skin. Now this is the only instance I have got of syphilis being produced in an infant in consequence of primary disease in the mother; but I cannot positively say that she had not secondary symptoms before the birth of the child. There is a paper by Mr. Hey, in the *Medico-Chirurgical Transactions*, 7th volume, intitled, "Facts illustrating the effects of the Venereal Disease on the Child in *Utero*;" and it appears to me, from the circumstances he states, that it generally arises from secondary disease in the mother. I also observe that he discusses the question which I submitted to you in a former lecture on this subject; namely, whether syphilis can be communicated from the husband to the wife by cohabitation, when the husband labours under secondary or constitutional symptoms. He is of opinion, though he is not able to give us positive facts in the affirmative, that the disease may be so communicated,—that the husband labouring under secondary symptoms may, by cohabitation, communicate the disease to the wife: and such, I acknowledge, is likewise the impression on my own mind, from circumstances that have come under my observation.

Children receiving a syphilitic affection in utero are sometimes born with the cuticle desquamating, or peeling off all over them. They are in a wretched state, thin, emaciated, excessively weak, and, in fact, seem ready to die. Such is the form in which syphilis exists at the time of birth. But more commonly the children are born healthy, and a few weeks after birth begin to exhibit symptoms of the disease;—redness, excoriations, superficial ulcerations, and sometimes vesicles or pustules, shew themselves about the anus and external organs of generation; and this affection of the skin, which commences in these parts, gradually extends from thence all over the body. Thus, in the course of a short time, you find that the child presents, over the whole frame, patches of red, coppery discolouration of the skin, sometimes in large quantity, and at others to a more limited extent. These go into a scaly state, and the cuticle desquamates, or separates, over the whole of the body, sometimes without very manifest previous inflammation of the skin; but we find it spreading every where, even to the palms of the hands and the soles of the feet. You will see these patches of light coppery red discolouration of the skin particularly large and vivid about the face;

so that the child's face has a nasty, scabby appearance. You observe large fissures at the corners of the mouth, aphæ of the mucous membrane, and soreness about the eyelids; you find that the nostrils become inflamed and tender, and that a thick, viscid, yellow secretion, stops up the nares, so that the child makes a kind of sniffling noise, and seems as if the respiration were impeded. When you come to examine it, you find the nostrils plugged up with thick yellow matter. In conjunction with these symptoms you find, as you might naturally expect, that the child loses flesh, becomes shrivelled, miserably emaciated, fretful, and irritable, exhibiting marked signs of the most unfavourable constitutional affection; and, in fact, if the disease be not relieved, it very soon sinks under it.

It has only happened to me in two instances to see iritis as a symptom of syphilis in the infant. I have seen two cases of that kind, but of the other symptoms I have seen a great number of instances; and they have consisted, more or less, of the affections I have just mentioned. Sometimes there are particularly marked indurated ulcers about the anus; that is, superficial ulceration, with elevated edges, and rather an indurated base.

The treatment of these cases is very simple: you must administer mercury; and, fortunately, these young subjects bear it very well. Half or three quarters of a grain, or a whole grain of calomel, may be given night and morning; or a few grains of hydrar. c. creta may be given as often; and this treatment accomplishes all we wish. You find that by these means the local symptoms that I have described very speedily become relieved; the ulcerations, if they have been present, heal rapidly; the scaly eruption of the skin goes off; the discharge of the nose ceases, the child recovers flesh; and, in some instances, where it seems so emaciated and reduced that we could not anticipate any thing but its dissolution, the symptoms go off, and the child recovers its health and strength.

On the Continent it seems a more general plan to administer mercury to the mother, and affect the child through her medium. I find, however, that the direct administration of the mercury to the child answers extremely well, so that I have generally adopted that plan of treatment.

You should be aware that the syphilitic disease I have now described, when it occurs in a child, is capable of being communicated from the child to a sound woman who may suckle it; and that women who thus receive the disease are capable of communicating it to other persons. Thus it is of great importance that those women who nurse such children should be aware of the

nature of the affection, and employ all the precautions calculated to prevent its propagation.

The effect of the venereal disease, when it is introduced into the system of the mother, and when it thus influences the health of her offspring, is, in some instances, not confined to a single birth, but extends to several; and that in cases where the woman has not received the infection immediately by sexual intercourse. There are two or three instances of this kind related by Mr. Hey, in the paper that I have just alluded to. He mentions, that in the latter end of the year 1770 and the beginning of 1771, a blind woman, who gained her living by drawing the breasts of women during their confinement, became affected with ulcers at the angles of the lips, which were judged to be venereal. He found that she had drawn the breasts of a woman who was supposed to be labouring under the venereal disease. He treated these ulcers as syphilis, and they healed under that treatment. He observes, that several women whose breasts had been drawn by this woman became affected with syphilitic disease. He mentions one case in particular. Mrs. B. had her breasts drawn twice by this woman, upon the death of her second child, which died of the small-pox, and within three or four weeks afterwards perceived a swelling of the axillary glands, and complained of soreness in her throat. The swelling in the axilla was, no doubt, the effect produced by this blind woman drawing her breasts. The gentleman who saw the sore throat deeming it to be venereal, exhibited mercury, and it got well. During the treatment she became pregnant, but continued the use of the mercury during her pregnancy; and at the end of seven months she miscarried of a dead child. She became pregnant again in 1772, continued to enjoy good health, and was delivered of a child apparently healthy in February 1773, which she herself suckled. When the child was about six weeks old, an eruption which Mr. Hey judged to be syphilitic appeared upon its legs and arms. He put both the mother and child upon a mercurial course, giving the former small doses of hydrar. submurias, and the latter hydrar. c. creta. By that treatment, the child was in a short time freed from the eruption, but continued to take the medicine till the beginning of August. In October following, two or three small ulcers appeared on the outside of the labia pudendi of the child, and on that account the mercurial course was resumed, with the addition of an occasional dose of hydrar. submurias. The ulcers were soon healed, but in May 1774, the nostrils became sore, and the integuments of the nose were also tender;—at the same time the child grew hoarse. The

mercurial course was repeated, and continued for two months. The child also took the medicines during part of the months of September and October; after which time there was no recurrence of disease. In June 1775, this same woman bore another child, which was apparently healthy at its birth, and continued to be so for a few weeks. Blotches of a copper-colour then came out upon the skin, but soon disappeared, upon having recourse to mercurial medicines. After some time the blotches appeared again, and were accompanied with a small ulcer in the labium pudendi, as in the former case. The child was, however, completely cured by a repetition of the treatment, and remained well.

Now here you observe there is a succession of appearances, proceeding from 1771 to 1775; successive children of the same mother becoming affected by venereal disease, which she had received from the woman who had drawn her breasts; so that it had not been communicated through the medium of sexual intercourse.

Some time ago, I had occasion to see a case of affection of the breast, where there was a primary ulcer, with indurated base and margin, consequent on disease communicated to a nurse by a child that she was suckling; and the facts of the case that I have just alluded to may serve to illustrate the natural history of these affections. A lady, in the family way, called upon a poor woman, and told her that she was living in private; and observing a healthy child at her breast she asked her to take her infant when it was born, and suckle it. The woman consented, keeping her own infant at the right breast and the other at the left breast. The latter child was healthy at the time it was born, but she stated that, in a week or a fortnight after, she observed two small blisters, as she described them, come about the organs of generation, the nose got stuffed, and the mouth became sore; in fact, the woman described clearly a syphilitic affection of the child. As soon as the child's mouth was affected, her own nipple got sore. The child took white powders, and the eruption gradually got better, but her own nipple remained sore. At the time I saw her (February 1827) the infant had not got well, its skin had marks of venereal eruption over various parts of the body, and it was stuffed about the nostrils; the suckling still continued. The woman who nursed the child had a smooth red superficial ulcer upon the breast. The sore looked clean; in size it was nearly equal to a shilling. The substance of the gland about the nipple was indurated, forming a lump as large as an egg; there was also a superficial sore in the axilla, and a lump above it, which probably was a

glandular affection caused by the primary sore. When I asked her whether she had any eruption or sore on any other part, she said she had not; but I found, by examination, a few small spots on the scalp, a few of a similar character on the region of the pubes, and two or three superficial ulcerations on the labia. These were the appearances that resulted as the secondary symptoms of the primary sores communicated through suckling. I gave her mercury in a moderate way. Her own child, which had taken the right breast, continued well; which was a singular circumstance. She had been suckling it for some weeks, at the same time that she nursed the diseased child, and though she was affected with constitutional syphilis, her own child did not suffer at all. By means of the remedies employed, both the child and nurse got better.

After a time, she passed the child on to another woman; she did not choose to go on suckling it any longer, and the child seemed tolerably well when the other nurse was engaged for it. I had first seen the child in February, and I saw it again in April. It was then mentioned that the child had been sent to another nurse, and that, a week before, a few small brown patches appeared on the anus and about the face, and that some discharge took place. The nurse's nipples had become sore, but it was a mere common excoriation. The nurse that I first saw, had then fresh appearances of a scaly eruption; the nipple to which the disease was originally communicated was well. On the 18th of July the second nurse called, to shew me a sore on the breast; it was without granulation, about the size of a shilling, and had existed three weeks, not having been checked by the applications that were used. The child that had given her the disease had died of the measles, before I saw the woman on this occasion. On the 20th of July, this second nurse had a small reddish eruption thickly scattered over the hands, especially on the palms. On the 24th the eruption was more marked, and spread over the hand, running half way over the fore-arm. She took mercury, and the symptoms disappeared; the sore on the mamma and the eruption went off. The second nurse was delivered of a fine healthy infant, about the 2d of April, 1828; and this child was brought to me on the 20th July, covered with syphilitic eruption from head to foot. It consisted simply of red patches, principally on the body, with the cuticle peeling off. Those on the hands and fingers, and on the organs of generation, were deep red, and partly excoriated. The lips were chapped and scaly. This child was emaciated and fretful, and was fed by the hand, the mother having no milk. The child got well, but the mother died of phthisis.

Here you see there was a child giving

the syphilitic disease to a healthy woman that nursed it; at the same time her own child, which was kept to the right breast, had no disease. The woman—that is, the nurse,—had a primary sore on the breast, and an affection of the absorbent glands, eruption over certain parts of the body, and appearances on the external organs of generation similar to what we should recognize as a primary syphilitic affection. This child is then put to another woman to nurse—the child then appearing well. The second woman has a primary sore on the breast; has an eruption occurring over various parts of her body; she then becomes pregnant, and is delivered of an infant, who, in about four or five weeks, is covered with syphilitic eruption from top to toe.

Now, in these and a variety of cases of a similar kind, the evidence of the nature of the disease, of the mode in which it is communicated to the children, and in which these children are capable of communicating it to other individuals, are so clear, that I am quite at a loss to discover what the grounds are which have led persons to doubt the syphilitic nature of such affections; and I can say most decidedly, that the administration of mercury, in the way that I have mentioned, is the most efficient mode of removing these appearances.

LECTURE XXVIII.

Gonorrhœa—Question of its identity with Syphilis—its history and treatment—Gonorrhœal Rheumatism.

THE disease, gentlemen, which bears the technical name of gonorrhœa, and which common mortals call *clap*, is an inflammation of the mucous membrane of the urethra, attended with puriform discharge, which discharge unluckily possesses infectious properties—that is, it is capable of communicating the disease to the mucous membrane of the urethra or vagina of a healthy person, when brought in contact with it. Thus gonorrhœa is an infectious disease; and it is usually conveyed from one individual to another by sexual intercourse, but not necessarily so. If you consider the etymological construction of the term gonorrhœa, it might lead you to a somewhat erroneous opinion with respect to the nature of the affection, more particularly as to the discharge which is produced. Gonorrhœa, which is derived from the Greek, is equivalent to the latin words *fluvius seminis*, that is, discharge or flow of seminal fluid. Now, I need hardly perhaps acquaint you, that the discharge which takes place from the urethra in gonorrhœa is not of that nature—that it is an increase, with alteration in the quality, of the natural mucous secretion of the part—an increase and alteration in

quality consequent on the state of inflammation in the membrane. In order to give a more significant name, some foreign writers have proposed to call it *blennorrhœa*, which merely means, excessive flow of mucous fluid; however, the term gonorrhœa is one so generally received, and the meaning of which is so well known, that we need not attempt to look for any other.

I had occasion to speak to you, in describing syphilis, of what is called the *poison*, or *virus*, that produces the disease; and in the same way we recognise the existence of a poison or virus in gonorrhœa. A question has arisen whether these two diseases, that is, syphilis and gonorrhœa, are produced by one and the same poison, or whether they owe their origin to different poisons? I mentioned to you, that we know nothing of the venereal virus or poison, considered in the abstract, and we know as little of that of gonorrhœa—that is, we do not know what is the particular ingredient or quality in gonorrhœal discharge, or in the secretion from a syphilitic sore, that is capable of producing the disease in another person when applied to certain parts; we only know that a certain fluid, called gonorrhœal discharge, and the secretion of syphilitic sores, will produce such affections. We are acquainted, therefore, not with the poison in the abstract, but with the poisonous or infectious secretions, as manifested by their effects. The question, then, respecting the identity or diversity of these two poisons, seems to me to come to this—whether two things, both of which are entirely unknown to us, be the same, or whether they be different? It is very difficult to answer a question of that kind. We may perhaps make the question more clear, and more susceptible of an answer, if we put it in this form—whether gonorrhœal discharge be capable of producing syphilis; and whether the secretion of a syphilitic sore be capable of producing gonorrhœa? In this way it is reduced to a question of fact, which we should suppose might be tolerably easily answered. Now, if we see two effects that are perfectly like each other, we may naturally infer that the causes that produced them are similar or identical. On the other hand, if we see effects totally dissimilar, we can have no hesitation in saying they arise from dissimilar causes. How does the case stand, then, in respect to the present question? Syphilis consists of ulcers, followed by a train of morbid appearances in various parts of the body, occupying a long time, sometimes several years; gonorrhœa consists in inflammation of the mucous surface of the urethra or vagina, going through a certain course, coming to a natural end, affecting the parts immediately concerned, and not in general attended with further influence on the constitution. These two diseases seem

totally unlike each other; and the natural inference that presents itself to my mind from contemplating the diseases in this view would be, that they owe their origin to causes essentially different.

Those persons who believe that syphilis first arose about the time of the discovery of America, or the invasion of Naples, are still of opinion that gonorrhœa existed before that time, and that it was an old disease. We should naturally suppose that persons who held that opinion, would think that gonorrhœa depended upon a poison different in its nature from that of syphilis; for if gonorrhœa existed from more ancient times, how does it happen, supposing the poison that produced it to be the same as that which produced syphilis—how does it happen, I say, that syphilis has not existed as long as gonorrhœa? The belief in the identity of the poisons seems to me incompatible with the idea that gonorrhœa is an ancient affection, and that syphilis is one of recent date. However, it does happen that persons who believe in the more recent origin of syphilis, are still of opinion that the poison producing the two diseases is the same. This was the case with Mr. Hunter. He was a great advocate for the identity of the poisons of gonorrhœa and syphilis; in fact, he says the two poisons are the same, and that the difference in the two diseases arises merely from the differences in the texture of the parts to which the poison is applied—that is, if the poison be applied to a mucous surface, such as the urethra or vagina, then it causes gonorrhœa; if it be applied to a surface covered by a cuticle, then it produces syphilis—primary syphilitic sores. But if this were the only difference in the two cases, it appears to me in the first place, that we should expect to find females labouring almost invariably under gonorrhœa, and very seldom under syphilis, because in them the poison is applied to the surface of the vagina. It may be applied to some of the external parts of the genital organs, but not necessarily so. However, in the female the poison is necessarily applied to the surface of the vagina; and we ought, therefore, if the poison be the same, to have gonorrhœa constantly produced; but we do not find that gonorrhœa exists in a greater proportion in females than syphilis. Then, on the other hand, we should expect to find that syphilis would be found much oftener in men than gonorrhœa, because the poison is applied in them to the external surface of the penis, or prepuce, or glans; and it seems rather difficult to account at all for the introduction of the poison into the male urethra, yet gonorrhœa occurs very frequently in males. To settle the question of the two poisons being identical, we ought to find gonorrhœa and syphilis co-existing together, because in the majority of instances we may suppose that the poison has

been applied, especially in females, both to a secreting and non-secreting surface. Now, we do sometimes find that gonorrhœa and syphilis exist together, but their co-existence is comparatively rare.

Mr. Hunter attempted to bring this opinion to the test of direct experiment, and introduced by puncture with a lancet the matter of gonorrhœa into the glans penis and prepuce. He has given a long account of his experiment, the result of which was chancre in the part, sore throat, nodes, and so forth. If this experiment were to be admitted, it would be decisive of the question, as it would unequivocally prove the production of syphilis from the introduction of gonorrhœa into a wound. For my own part, however, I can only say, that in the narrative there are so many inconsistencies, that, in spite of the high authority of Mr. Hunter, I must withhold my belief; and I am in some measure encouraged in this by the fact, that attempts have been made to produce primary syphilitic sores from gonorrhœal matter, and to produce gonorrhœa from the discharge of syphilitic sores, which attempts have totally failed. Mr. B. Bell, of Edinburgh, recounts several experiments made for both of these purposes: experiments in which gonorrhœal discharge was introduced by inoculation with a lancet, and produced no effect whatever, and other instances in which the secretion of primary syphilitic sores was applied to the vagina and male urethra. Now, when the secretion of a chancre was introduced by a small puncture into the surface of the male urethra, he found that disease was produced, but not gonorrhœa; in fact, chancre was produced—chancre which led to the occurrence of secondary symptoms, and required a long course of treatment for their cure; and here I may observe, that Mr. Hunter's statement is by no means correct—that the application of any given infectious matter, either to the vagina or urethra—that is, to a secreting mucous surface—will produce, not a sore, but discharge. That statement is not correct, for we find—not very frequently indeed, but so often that it is perfectly well known—that chancre may take place within the orifice of the male urethra, and a troublesome thing it is when it occurs there. We also know that chancre may take place within the vagina. The urethra and vagina are both susceptible of the occurrence of syphilitic ulceration.

The general result of the observations that I have made leads me to the opinion that gonorrhœa and syphilis are *essentially distinct* in their nature; that the poison that produces the two must be different, and that there is a much greater difference between the two affections than can be accounted for simply by any difference in the textures of the parts in which they are seated. I con-

sider them as totally and essentially different in their nature, and cannot doubt but that the causes which produce them must be equally different.

A certain interval of time elapses between the application of the infection and the occurrence of gonorrhœa—a few days. Gonorrhœa generally takes place sooner after infection than chancre, but it may be protracted for two or three weeks. In the first place a slight degree of heat and uneasiness is experienced about the orifice of the urethra; the margin of the opening swells and becomes red, that is, the lips of the urethra become tumid and red, and then very quickly the discharge shews itself. A thin yellowish fluid issues from the urethra, increases in quantity, and becomes thick and yellow, sometimes having a greenish appearance. The pain and uneasiness increase in proportion as the discharge increases. Together with these symptoms, you find that a very unpleasant sensation is experienced in making water. The passage of the urine over the inflamed surface of the urethra produces a sense of burning and scalding, technically called *ardor urinæ*—a sense of heat in making water; after which the increased secretion flows very copiously from the urethra. The symptoms increase to a certain extent in violence, and last for a certain time; they then begin to decrease, the pain subsides, the discharge diminishes in quantity, and continues to decrease till it goes away altogether; and thus gonorrhœa, if left to itself, will pursue a certain course, and disappear entirely, this process occupying a space of perhaps four, five, or six weeks. Sometimes, instead of disappearing entirely, the discharge diminishes in quantity, becomes thick, has a less bright yellow colour, and sometimes even becomes colourless. The scalding in making water is lost, and nothing remains except this increased secretion. In that state the complaint may last for a great length of time—weeks, months, or even years; and it is then technically called *gleet*.

But persons who catch a clap do not always get off quite so easily as this: what I have described is a sort of gentle clap, where the symptoms are mild—a sort of middling case. Frequently, however, the inflammation is very considerable; the glans penis swells and becomes of a bright colour; the lips of the urethra are particularly tumid and red; the prepuce swells, becomes oedematous, and passes into a state of phimosis, while, at the same time, the inflammation extends along the whole length of the urethra to the bladder. In the milder case that I have been mentioning, it is found by examination that the inflammation of the urethra does not reach further than about one inch and a half, or two inches from the orifice, and Mr. Hunter calls this the “specific distance.” He

seems to have an idea that in the infectious disease, properly called clap, the inflammation usually does not reach beyond the point I have mentioned. However, the inflammation by no means observes this boundary in all cases; it often goes beyond what Mr. Hunter has described, runs along the urethra, and extends to the bladder; and, indeed, the mucous membrane of that viscus is sometimes involved in the inflammation. In these cases there is violent pain of the urethra; this runs along to the perineum, and is felt severely about the anterior region of the bladder. The patient also experiences painful erections, caused by the irritation to which the penis is subject. They are repeated frequently, and give rise to excessive pain. This is a symptom usually experienced in clap to a greater or less extent. The violence of the inflammation is sometimes attended with an effusion of coagulable lymph, either in the interior of the corpus cavernosum or the corpus spongiosum urethræ. Owing to this, when the penis is erected, it becomes curved in an unnatural direction, a circumstance which has given rise to the term *chordee*, as if the part were confined by a cord or string.

In another form of this affection—when the inflammation extends to the bladder, the patient is tormented by an incessant desire to void his urine, and the act of doing this is excessively painful; the ardor urinæ is increased to an almost unbearable degree under such circumstances; and inasmuch as the mucous lining of the urethra is swelled, from the state of congestion in all the vessels, the canal is diminished in its caliber, so that the urine comes out slowly, and of course the pain in discharging it is proportionately augmented. At length this difficulty in the discharge of the urine sometimes proceeds to such an extent that it comes away by drops, or it may even proceed to complete retention of urine. It also happens occasionally that some of the over-distended vessels of the membrane give way, and blood escapes. This is a very favourable occurrence, because it tends to relieve the turgid vessels of the inflamed membrane.

Such are the circumstances that characterize clap in the worst form. When the inflammation occupies the whole of the urethra, when it affects the prostate and bladder, there is perhaps hardly a more painful disease, or one altogether of greater suffering while it lasts, than a case of gonorrhœa which extends in this way. Then other cases again are particularly mild; they trouble the patient with very little pain, and there is only a little uneasiness in voiding the urine.

We next come to speak of the treatment—how to cure the clap. It would be an interesting discovery indeed if any one could find a speedy and effectual mode of accomplishing this object;—medical, and all stu-

dents who feel greatly interested in the subject, would immortalize his name; and the nymphs in the Strand would no doubt erect a statue to his memory. I believe, however, that there is no speedy mode of accomplishing a cure; and that we are not able to diminish very much that kind of moral lesson which this suffering is calculated to convey.

The treatment of the clap may be considered either as *rational* or *empirical*.

When we proceed to treat it *rationally*—according to principle, we regard it as an inflammatory complaint, and employ antiphlogistic treatment, suited in activity to the symptoms. In some of the bad cases that I have mentioned it may be necessary to take blood from the arm, and from the loins or perineum, by cupping or leeches, and then to administer purgative medicines, followed by sudorifics, such as salines, with antimony. The patient must be kept at rest in the recumbent position, and put on low diet; and, in fact, subjected to a pretty rigorous antiphlogistic plan. After cleansing the bowels actively, the liq. ammoniæ acetatis, with nitre—nitre with supertartrate of potash, or these different medicines combined with antimony, in pretty considerable doses, may be administered. Mucilaginous drinks should be freely taken, to dilute the urine and render it less stimulating to the urethra, such as barley-water, linseed-tea, gruel, and gum-arabic water. Alkaline remedies are found capable of assisting in this object, particularly liq. potassæ, which may be given in the drinks that I have mentioned; and perhaps the best way to relieve the scalding is to give a moderate dose, about ten drops, each time after the patient makes water. If you merely give it at distant intervals the effect on the urine is lost, but if you give it regularly, immediately after making water, it will have an effect on the secretion before the next time the patient wants to pass his water. If considerable pain remains about the urethra and bladder, after you have adopted pretty active means, you will find it advantageous to put the patient in a warm bath—the hip-bath, and to administer Dover's powder, opium, or hyoscyamus, in a full dose. When the sensation about the bladder and urethra continues, and is very troublesome, you relieve it by active antiphlogistic means, and by the administration of opium, in the form of an injection. In the milder cases of gonorrhœa you adopt a gentler kind of antiphlogistic treatment: you empty the bowels, keep the patient quiet, put him on low diet, give him nitre with supertartrate of potash, and mucilaginous demulcent drinks. In a state of high inflammation of the penis, patients experience relief from the application of cold, and frequently bathing the part. Sometimes they fancy they derive more benefit from the application of warm fomentations, or poultices, or steeping the penis in warm water.

An attempt has been made to cut short the disease in the urethra by means of local applications to the inflamed membrane in the form of injection; and, in fact, these applications make a considerable figure in treatises upon the subject. Injections are divided into some three or four classes; thus we have emollient, sedative, astringent, and stimulating injections. Various mucilaginous and narcotic substances, such as opium, have been recommended, under the idea of soothing and relieving the pain; that is, supposing them to act as emollients or sedatives. I believe we can do no good in this way by injection. So far as my knowledge goes, no benefit is derived by the individual from such injections, whether emollient, sedative, or narcotic; and we will, therefore, leave these out of the question.

As to stimulating injections, I do not suppose that any inflamed mucous membrane can be benefitted by such means, but I have not had much experience of this mode of treatment. We come next to the consideration of astringents. It has been proposed, and extensively acted upon, to inject pretty strong solutions of astringent substances into the urethra in the early stages of the affection, with a view of stopping the discharge, and cutting short the disease. A solution of nitrate of silver has been employed for this purpose, in the proportion of ten grains to the ounce. It is said, that if this be thrown into the urethra at an early period, it will stop the affection. I may observe, with respect to astringent injections generally, that you do not want to apply them farther in the urethra than what Mr. Hunter has called the specific distance; and, by pressure with the finger on the outside of the urethra, you prevent the fluid you throw in from passing farther than this. I have not myself tried this mode of injecting a strong solution of nitrate of silver, with a view to stop the disease in its origin, and therefore I can give no positive opinion about it: I can only say, that it has been tried frequently in the army, and it is generally represented as effectual and safe by those who have used it. In most instances where we use injections, it is after having treated the inflammation, and more violent symptoms, by the anti-phlogistic means that we have already described as adapted to this purpose. We employ astringents in a milder form, as sulphate of zinc, sulphate of copper, nitrate of silver, the oxymuriate of mercury; of the three first two or three grains to the ounce of distilled water; of the latter not more than one grain to the ounce. This should be injected three or four times in the course of the day, in the way mentioned; and in many cases the injection pretty quickly puts a stop to the increased secretion of mucus. In other instances, however, it fails to do so; and in some cases it seems to aggravate the symptoms, increas-

ing the inflammation, and augmenting the discharge. These astringent injections have incurred the discredit of giving a disposition to stricture in the urethra. Hence many practitioners never employ them; and I fancy, generally speaking, in the treatment of gonorrhœa they are not now much employed. So much for what we should call the *rational* treatment of clap.

We now come to the *empirical* treatment; and we shall find that particular remedies exert a certain power over this complaint, although not of the kind that we should have expected to be beneficial in such cases. One of these is a remedy of recent introduction; but which, from the experience of its efficacy, is very generally employed,—I mean *Cubeb* pepper, which is also called *Java* pepper—*Piper cubeba*. This, given in large doses at the very commencement of the complaint, will frequently bring it to an end in a few days; and in other instances, though it will not completely arrest the complaint, it will stop the violent symptoms connected with it, so that the patient has simply discharge, without pain or arder urinae. For this purpose you should give not less than two drachms of the powdered pepper, three or even four times a day. The longer the complaint has existed before you use this remedy, the less likely are you to stop it by its means. The most beneficial influence is shewn when it is given in the early stages; and the existence of active inflammatory symptoms is not a sufficient objection to its administration. Another remedy, more commonly employed after the anti-phlogistic treatment, is *copaiva* balsam—*balsamum copaiba*; which is given in doses of half a drachm to a drachm three times a day, either simply by dropping it on moist sugar, or taking it in a little water, like castor oil; or administered in some mucilaginous vehicle, or in mixture, in which it is combined with liq. potassae. After the employment of general anti-phlogistic means, the *copaiva* has a marked effect in bringing the inflammation to a close. *Copaiva*, and the various astringent injections, are the means most commonly employed in the protracted form of the affection called gleet.

I have mentioned to you that the inflammation of the mucous membrane of the urethra runs through a certain course, and comes to a natural end, without entailing future ill consequences on the patient. There are, however, some instances in which we have reason to suppose that secondary symptoms have followed gonorrhœa; but these instances are so few, that many individuals have never seen any case of the kind, and hardly believe the possibility of their existence. Those, however, who have had most extensive experience in the treatment of this complaint, recognize the possibility of secondary symptoms from gonorrhœa. This

is the case with Mr. Carmichael. He says it is sometimes followed by papular eruption, superficial ulceration of the tonsil, and pains of the joints and limbs; but that the symptoms under such circumstances do not require the employment of mercury for their cure, the ordinary anti-phlogistic treatment accomplishing all that is necessary.

There are some other circumstances occasionally attendant on gonorrhœa which require to be mentioned. The inflammation of the urethra may cause inflammation of the glands in the groin; that is, it may cause bubo; but if you adopt the anti-phlogistic measures which the local complaint requires, and keep the patient at rest, you will not be much troubled by this symptom; at all events its treatment is to be conducted upon ordinary principles.

The inflammation of the prepuce, if it go to a considerable extent, will cause *phimosis*; that is, a contraction of the lining of the prepuce forming the orifice, so that the part cannot be drawn over the glans. You must here employ local means to reduce the inflammation, and you will not find that *phimosis* is a serious symptom in cases of simple clap. It is necessary, in order to lessen the inflammation, under such circumstances, not merely to adopt those local antiphlogistic means which are obviously required, but carefully to syringe under the prepuce, to prevent the accumulation of gonorrhœal discharge, and to keep the parts clean. The discharge, if allowed to remain, irritates the delicate covering of the glans and the lining of the prepuce, augmenting the inflammation of those parts, and sometimes leading to serious ulceration as the consequence. Hence it is necessary that ablution of the parts should be carefully put in force by means of syringing.

Sometimes the opposite state—that of *paraphimosis*—may arise in gonorrhœa, or when sores exist on the parts in syphilis; that is, supposing the orifice of the prepuce to have become contracted by inflammation, and the patient has drawn back the fore-skin for any purpose, the contracted orifice of the prepuce, now situated behind the glans, occasions it to swell, and soon the parts get into such a state as prevents the prepuce from being drawn forward again. That is the condition of *paraphimosis*. If the part remains in this state for some time, considerable swelling and inflammation of the glans will take place; the pressure of the contracted orifice of the prepuce becomes more considerable; it produces a deep fissure behind the corona glandis, as if the penis were tied by a tight string. When you see a case of this kind, within three or four days of the occurrence of *paraphimosis*, you seldom fail in restoring the glans to its natural situation. In the first place, you may get a basin of cold water, and let the

patient, with a sponge or a piece of lint, bathe the part so as to cool it as much as possible. Then you press gently upon the swollen glans with the thumb, or thumb and finger of one hand, while you gradually draw over it the contracted orifice of the prepuce with the thumb and finger of the other hand. If you proceed slowly, squeezing out the blood from the glans as well as you can, so as to reduce its size, then managing to push it gradually into the opening of the orifice, at the same time that you draw the prepuce gently forward, you will usually succeed in replacing the parts, and thus relieve the patient from a state which to him is one of considerable alarm and apprehension, besides being very painful. But when the prepuce has been left in this unnatural position for some time, considerable inflammation takes place, effusion occurs, and, in fact, the prepuce and skin of the penis become fixed and agglutinated in their new situation. Under such circumstances, you find it necessary to cut through the strictured part; for you find that the stricture, although perhaps it may not produce active inflammation of the glans, yet alters very much the figure of the penis. If you make a little incision in the swollen part, immediately behind the deep fissure of the prepuce, you will be able to introduce the director, and with a sharp-pointed bistoury to cut it through, and thus allow the prepuce to resume its natural place.

The irritation of gonorrhœal discharge very frequently produces warts, either on the glans or on the prepuce; and still more frequently produces great abundance of them on the external organs of generation in the female. The genitals of the female are so situated, and circumstanced, as to lead to a considerable moistening of them by gonorrhœal or other discharge occurring in these parts. The discharge continues to irritate the parts, and thus you have an immense growth of warts frequently occurring about the orifice of the vagina, the nymphæ, perineum, and neighbourhood of the anus. Sometimes we find the anus so covered as not to be able to feel the orifice of the intestine, while the perineum and external organs are so beset with them that you would not recognize the parts. You see large irregular warty masses, not much less than the hand, proceeding from the parts, and arising merely from the irritation of the cutaneous texture, excited by the gonorrhœal discharge.

When the warts are of moderate size, you may treat them either by irritating substances or escharotics. In the first place, you adopt all the means you can to remove the cause that produces them—that is, to put a stop to the discharge—to put a stop to the state of inflammation and excoriation of the surface on which the production of the

warts depends. When you have done that, you may rub the warts, if they are of moderate size, with lunar caustic, or sprinkle them over with an irritating powder. For this purpose you may use the pulvis sabinæ, or acetate of copper. When they are large, however, they do not yield to these remedies, and you must then remove them with a knife, or scissars, and in a few days rub the surface with lunar caustic, so as to prevent their recurrence. Some persons have recommended strong acids; and Mr. Carmichael speaks very favourably of the acetic acid, which acts, as any other strong acid would do, as an escharotic, in destroying the vitality of the parts.

In the course of gonorrhœa, it is not uncommon to have the discharge suddenly stop, and inflammation and swelling, with great pain of one of the testicles, come on. The occurrence of this particular kind of inflammation of the testicle has been called *hernia humoralis*. It is, in fact, active inflammation of the gland—inflammation of the testicle. The part swells, becomes very painful, and, if the inflammation is considerable, the scrotum which covers it assumes a bright red colour. When the inflammation is very considerable, it extends to the loose cellular texture of the scrotum, so that the integuments become in some degree fixed to the surface of the inflamed part. Severe pain is felt, more particularly when the patient is in the upright posture, or uses any exertion. The discharge from the urethra generally stops entirely.

You must treat this inflammation by ordinary antiphlogistic means: free bleeding of the part by the application of leeches, warm fomentations, and poultices; the recumbent position, and clearing the bowels. Sometimes you apply leeches pretty freely and repeatedly, and yet you do not succeed in putting a stop to the inflammation: the part remains much swelled and very painful. Under such circumstances you derive great advantage from the free employment of tartar emetic, so as to produce vomiting. You give half an ounce of liq. antimonii tartarizati, which contains one grain of tartarized antimony, and repeat the dose every four hours, by which you keep up nausea and vomiting. Under such circumstances you frequently afford the patient relief in this way. Indeed this treatment alone is frequently had recourse to, to remove inflammation of the testicle, constituting *hernia humoralis*; and I have seen particular instances where great pain and inflammation have continued after the application of leeches, and where the employment of the emetic tartar, in the way just mentioned, has put a stop to those unpleasant symptoms very speedily. It is necessary for the patient to remain in the recumbent posture until the swelling has completely abated; at all events, if a patient

who has been confined on account of *hernia humoralis* gets up too soon, and trusting to a diminution, with seeming relief of the symptoms, attempts to go about his ordinary occupations, he commonly brings on a relapse; so that great caution is necessary on this point.

There are other and more serious circumstances arising from gonorrhœa;—in particular constitutions, for example, when it takes place in individuals of rheumatic disposition. These persons are liable to the occurrence of severe inflammations of the eye, attacking the mucous membrane of the part, sometimes involving the sclerotic, sometimes even extending to the iris, that is, to the fibrous textures of the organ. Sometimes one of these forms, and sometimes another occurs; the pain in the urethra being diminished in intensity though the discharge goes on more or less. These affections of the eye I shall have occasion to speak of when I come to consider that part of the subject, and to treat especially of diseases of the eye. In the same individuals in whom there is such affection of the eye in consequence of gonorrhœa, it will almost invariably happen that rheumatism of the joints also takes place, very commonly of the knee, feet, and ankles, and even of other joints,—affections which so closely resemble rheumatism that it is not unaptly denominated *gonorrhœal rheumatism*. Inflammation of the synovial membranes, and enlargement of the joints (the consequence of increased secretion of the membrane) is the character it assumes when it appears in such parts as the knee. When it attacks the feet, you find a kind of œdematous tumefaction, which in common life is designated rheumatic gout. This affection will extend from one joint to another; one joint will get better, and others become affected. In fact, in the particular symptom of the extension and shifting of the disease from one joint to another, as well as in the general circumstances of the affection, it possesses nearly all the characters that belong to rheumatism. Such affections of the joints may take place in conjunction with the diseases of the eye, or in alternation with, or in succession to them.

In the treatment, you are to bear in mind the peculiar condition of the constitution from which this collection of symptoms derives its origin. You are not to be contented under such circumstances with the mere local means which the state of the joints may require; you must always keep in mind the general state of the constitution. In the first instance it may be necessary to take blood from the arm; it will be proper to evacuate the alimentary canal freely; for which purpose a combination of calomel, antimony, and colocynth, answers well. After using these means I think you abridge the duration of the disease, lessen the intensity of the

symptoms, and prevent those changes of structure which would subsequently impair the motion of the joints, by the exhibition of mercury; nor would it do any harm if, in the course of the treatment, some affection of the mouth were produced by it. Colchicum is another remedy occasionally employed with advantage under these circumstances. So far as *local* treatment is concerned, you find abstraction of blood by cupping and leeches, and fomentations, the most advantageous; but these local means will not answer the purpose without the more general measures that I have just pointed out. These affections are very tedious. Complaints in parts like the joints, which arise from constitutional causes, must naturally be so, as you cannot speedily alter the state of the system on which they depend. Hence, in the chronic state of the disease, persons are inclined to attempt to expedite the cure by blistering. I think blistering will not do good when there is any thing like active inflammation remaining. When patients have had these complaints for a length of time, we frequently find benefit produced by removal to the sea-side, and employing a course of sea-bathing; but after all, this healthy state, when it is produced, is not so much from the means just mentioned as from the complaint ultimately wearing itself out.

ANALYSES & NOTICES OF BOOKS.

“L'Auteur se tue à allonger ce que le lecteur se tue à abrégé.”—D'ALEMBERT.

Lectures on the Theory and Practice of Surgery. By JOHN ABERNETHY, F.R.S. &c.

THE distinguished veteran whose name appears in the title-page of the work before us, has redeemed the pledge made to the profession through the medium of this Journal—of publishing such of his opinions as had not previously appeared in his “*Surgical Observations*.” The volume is preceded by a preface—short and pithy, expressing, in terms of strong but dignified indignation, his opinion of that nefarious system of literary plunder which has of late years been so extensively practised.

“If a person,” says Mr. Abernethy, “educate himself with a view to become a teacher in any department of science, he endeavours to collect, by reading, all the scattered knowledge

that has been obtained; to acquire by his own observations and experiments additional information; and to arrange and display the whole of his subject in a perspicuous and impressive manner. Should certain portions of his lectures seem worthy of general attention, he progressively publishes them; and some of the most instructive books in our profession, as they were the result of long-continued meditation and inquiry, have been thus produced. But who would labour in this manner, under the persuasion that the fruits of his exertions might be surreptitiously taken from him? If this be permitted, it must put a stop to such efforts, and materially impede the progress of science.

“When the lectures of certain teachers—as of Boerhaave, Cullen, and Black—had acquired a high degree of celebrity, they were indeed surreptitiously published by persons who were naturally ashamed to acknowledge their acts; it has, therefore, been left to the present era to produce a character, in the editor of a periodical publication called the *Lancet*, so devoid of all good feeling and all sense of shame, as to avow and defend conduct so unprincipled.

“Whilst the lectures continued in the *Lancet* only, I was content, feeling assured that work would gradually sink into contempt and oblivion; but when another person extracted and published them as a separate book for his own profit, and seemingly without my disapprobation, I immediately sent to one of the periodical publications my disavowal of the work, with a pledge to publish my own notes of my lectures on those subjects treated of in the *Lancet*.

“It was always my design to publish some account of my surgical lectures, because I thought attention to what I regard as principles of practice, and which are particularly inculcated in these lectures, might be of the same use to others, that, I believe, it has been to me in the treatment of diseases. I have endeavoured to render the work as brief as possible, and by referring to my *Surgical Observations* for information upon all the subjects treated of in them, I have avoided repeating any thing that is already before the profession. It is the doctrinal part of surgery, and the arrangement of its subjects, which I am now chiefly desirous of submitting to general atten-

tion, that they may be considered, and approved, or rejected; for these are the points, if I am not mistaken, which have rendered my lectures interesting to the public."

The arrangement adopted by Mr. Abernethy is as follows. He considers,

1. "The disturbances of the system in general, which are produced by local affections." Under this division we find fever in its different forms—pain, fainting, sickness, rigors, tetanus; and disturbances of the alimentary organs, and their influence on the system.

2. "Local diseases which may occur very generally throughout the body." This division comprises phlegmon; chronic inflammation; tumors; abscess; irritative inflammation; erysipelas; furuncle, carbuncle, and anthrax; mortification; oedema; interstitial, progressive, and ulcerative absorption.

3. "Local diseases which occur in particular textures throughout the body." Such are diseases of the absorbent vessels and glands; scrofula; nervous affections; wry neck; neuralgia; diseases of the skin—of the bones—of the joints; diseases induced by extraneous causes, *e. g.* mechanical injuries and wounds—fractures—dislocations; injuries from chemical agency, *e. g.* burns and scalds; diseases induced by poisons; various affections of the urinary organs.

Such is a general sketch of the arrangement, and we shall select, from the various topics discussed, such points as are remarkable either for the originality of the views or the manner in which they are displayed.

The first portion which arrests our attention, is the chapter on chronic inflammation producing abscesses. The general rule in the treatment of these is, that if they be enlarging in circumference, and not advancing to the surface, they are to be opened. In making an opening, we are taught that it ought to be in a depending situation—on this point, however, Mr. Abernethy makes the following observations:—

"Some abscesses have their secretions lodging in them in consequence of their openings being situated unfavorably. It is therefore often thought proper to make what is called a depending opening; a practice, however, which has not appeared to me to be generally necessary, or even advantageous. This is strikingly illustrated by the following

case:—A boy who had a diseased hip-joint, accompanied with a large abscess opening on the fore-part of the thigh, and from the cavity of which a large quantity of matter was pressed upon every renewal of the dressings. As a probe could be passed so deeply into the abscess as to be felt distinctly at the back part of the thigh on the outer side of the flexor muscles of the leg, it was judged proper to make a depending opening at this point, and I therefore cut down upon a director, introduced from the front aperture, till it appeared behind, and afterwards enlarged the wound with a curved bistoury to the extent of two and a half inches. This opening for a time prevented any lodgment of matter in the abscess; but being made through sound parts, it could not be prevented from healing except by measures which might have greatly disturbed the general health of the patient. It was consequently suffered to close, and the secretions of the abscess then lodged nearly in the same quantity as before the operation; nevertheless the cavity contracted by degrees, and at length healed soundly."

In some instances, abscesses are to be regarded as dependent upon disturbance of the system in general, rather than on disease in the part where they occur. Such abscesses may take place in succession on different parts of the body, and do not come forward like those following phlegmon. Our author recommends that these should be speedily opened, when, for the most part, they rapidly get well.

"A gentleman, whose nervous system and digestive organs were exceedingly disordered, was seized with sudden and severe pain in the hip, so as to be rendered quite incapable of moving, the slightest effort causing him great agony. A very large abscess formed rapidly, which was opened, and a quart of matter discharged. The pain in the hip abated, and he felt a little better, though he was still so unwell that doubts were entertained of his recovery. The abscess shortly ceased to discharge, and the wound healed. After the lapse of about a week, a similar occurrence took place in the shoulder and upper part of the arm. The same degree of nervous pain did not, however, on this as on the former occasion precede the formation of matter, although the patient did still suffer much from local un-

business. A great quantity of healthy pus was likewise discharged from this abscess, and, like the other, it also rapidly got well; after which the patient gradually, though slowly, recovered his usual state of health."

"An army surgeon, a man of uncommonly vigorous constitution, was seized with fever whilst attending the troops at Walcheren, which left him in a very bad state of health, and with great disorder of the digestive organs. Nearly two years afterwards, having business in London, he took up his abode at an hotel in St. James's-Street. Here he was attacked with erysipelas in his left side, from opposite the sixth rib to the crista of the ilium. The inflammation suddenly disappeared, and he became delirious. On the second evening after this occurrence the inflammation reappeared in the side, and he regained his senses, but was unable to speak, and scarcely able to swallow. He requested in writing that I might be sent for. I found him with his tongue swollen, thickly furred, and indented with the marks of his teeth. The discharges which had been procured from the bowels were black and extremely offensive. I recommended that he should take half a grain of calomel with six of jalap, mixed in treacle, every fifth hour, until his bowels discharged sufficiently. Several free evacuations were thus procured during the night, and next morning I found him sitting up, and able to speak and to swallow with ease. A physician now attended, and prescribed medicines to allay fever, gentle laxatives, and alterative doses of mercury. The patient gradually recovered, and the erysipelas in his side subsided, so as no longer to attract his attention, till about a fortnight afterwards, when he perceived a prominence of the skin caused by an effusion of fluid beneath it. I opened this abscess with a lancet at the lower part, and gave issue to about twelve ounces of healthy pus: a linseed poultice was applied, and the abscess soon got well."

Under the head of "dressings to ulcers," we have some remarks of a very general nature, on the various substances employed for this purpose; after which a more particular account is given of our author's experience on the subject of arsenic applied locally. These are well deserving of attention.

"Some applications, again, appear

to excite a peculiar state of action, and thereby counteract the morbid condition we are desirous of removing. Mercury and arsenic seem to have such effects, the latter in particular: arsenic produces a peculiar and painful affection of the nerves, and inflammatory action of the vessels, which, if excessive, is destructive to the life of the part to which it is applied. Arsenic, therefore, produces deeper sloughs than are in general occasioned by those caustics that decompose the animal textures. As diseased parts are most likely to perish on the application of any extraordinary stimulus, so arsenic has been found to cause the sloughing of cancer and other diseased growths through their apparent extent, and has thus become famous in the hands of empirics, who apply it for this purpose indiscriminately. Thinking it may be useful to relate a case of this kind, I subjoin the following:—A patient came from the country to consult Sir Astley Cooper and myself on account of a cancer in the breast. We had no hope of being able to extirpate the whole of the disease by an operation, for it had extended deeply into the axilla, and we therefore recommended palliative measures. The patient then applied to a quack, who put an arsenical application to the tumor, which caused horrible pain, and was obliged to be removed in twelve hours, as it seemed to threaten her life. For three days no reasonable hope could be entertained that she would survive. The stomach rejected almost every thing she swallowed, she suffered violent tormina, and her bowels discharged great quantities of mucus mixed with blood. Gradually, however, she became easier, and recovered, though much enfeebled. Apparently, the whole of the disease of the breast sloughed out, leaving a large cavity with ulcerating edges, but of no unhealthy aspect. Yet, as might have been expected, the disposition to disease extended beyond its actual boundaries, so that the circumference soon threw out an unhealthy fungus, and the disease went on, no good consequently resulting from this imminently dangerous experiment.

"The cases which best illustrate the corrigent effects of arsenic on the morbid actions of sores, are those of peculiar ulcers, which frequently occur on the toes and sometimes on the fingers. The skin surrounding these ulcers is

thickened, and of a dusky hue. The surface of the sore is smooth, and of a tawny color, and discharges a foetid sanies or ichor. These sores in general spread under the nail, which, consequently, is detached, commonly coming away in portions. The sores are so extremely painful through the night, that they prevent sleep; during the day they do not cause so much suffering. I have known them continue for two years unaltered by a great variety of applications, and yet readily get well when arsenic was employed. Sir C. Blicke was, long ago, in the habit of using arsenic as a caustic to these sores, according to an empirical formula, called Plunkett's epithema. This composition was spread upon lint, and applied to the ulcerated surface, where it was suffered to remain during three days. A deep slough was the consequence of this application, upon the separation of which, the sore healed. The mode of using the remedy, however, was so horribly painful, that I was induced to try whether the application of arsenic in a milder form, and such as did not give pain, would correct the morbid actions of the sore; and I found it answer my most sanguine expectations. To shew this in a very striking manner, I relate the following case:—A gentleman who lived in the neighbourhood of St. Bartholomew's Hospital had an ulceration of the kind just described, attacking several of his toes. When I first saw him, I dressed the sores with arsenical wash*, promising to meet his medical attendant on the following day. The patient had been accustomed to summon his servant at five o'clock in the morning to get him some tea or coffee, to recruit him a little from his exhaustion through pain and want of repose. The disease had continued for two months gradually getting worse, during which time he had scarcely slept; but on the morning after the application of the arsenic, his bell had not rung even at nine o'clock, and his servants knocked repeatedly and loudly at his door without obtaining any answer: the anxiety of his domestics at length induced them to force it open, when they found him in a deep sleep, which had continued

without interruption from the time of his lying down in bed.

"The form in which I have used arsenic with a view to change the actions of exposed surfaces, is either that of the arsenical wash, in which pieces of lint are wetted and applied, or of an ointment made by mixing equal parts of sublimed sulphur and white oxide of arsenic, these being the chief ingredients of Plunkett's nostrum, with simple salve, in the proportion of ten or twelve grains of the compound powder above-mentioned to half an ounce of the salve. This ointment is spread upon lint and applied. The strength may be increased, but never to such a degree as to cause pain; and, used with this precaution, I have never known it produce any detrimental effect on the general system. These sores which are so much benefitted by its application are usually not large. In using it as a dressing in other cases, I have generally confined its contact to the diseased edges of the ulcer, and always been cautious not to apply it to a larger extent of surface than seemed necessary. One of the most remarkable instances of its success, in conjunction with other means, in subverting the diseased actions of a sore, is the following:—A man came into St. Bartholomew's Hospital with an indurated under-lip, having a firm, fungated, irregular surface, like a cauliflower. The disease extended from the corners of the mouth in a wedge form to the chin. The experienced surgeons did not think the disease carcinomatous; but none, I believe, thought that it admitted of cure. As the disease could not be extirpated by an operation, except by the removal of the whole of the under-lip (a measure which would have required a large triangular portion of skin to be raised from beneath the jaw to supply its place), and as the disease did not seem to make any rapid progress, we did not feel obliged to decide immediately on operating. The patient meantime was directed to take decoction of sarsaparilla, and alterative doses of the pik hydrarg., whilst his diet and the actions of his bowels were carefully regulated, and the arsenical wash was applied as a dressing to the sore, which in the course of about three months became perfectly well. What rendered the case more remarkable was, that the patient assured us

* Two grains and a half of the arseniate of potash dissolved in 3℥ss. of rose water and 3ss. of diluted spirit.

his father had died of a similar disease, which began in the chest, and never ceased to spread till, to use the man's own expression, it ate into his windpipe, and destroyed him."

The constitutional treatment of ulcers is strongly insisted on: small doses of opium are recommended to allay irritability, and mineral acids to act as tonics; but cinchona seems to be the favourite remedy, especially in sloughing sores.

Local nervous affections are attributed to certain conditions of the brain, or of the digestive organs—or of the nerves of the part. The first is too obvious and too well known to require any illustration; the last also is sufficiently apparent—as where wound, pressure, or other local injury of a nerve occurs. The sympathetic influence of the digestive organs, though generally admitted, is at least not so palpable; and it is a part of the subject on which our author, of course, is quite at home. The cases are interesting, but appear to us to admit of explanation on other grounds than those assigned to them by Mr. Abernethy.

"Of late years I have been in the habit of relating various cases, to shew that disorders of the alimentary organs may produce, by affecting the several portions of the medulla spinalis, an irritable or a paralytic state of the nerves of the neck, of the arm, of the loins, and of the lower limbs. The first I shall detail is one of wry-neck. A young gentleman, when at school, was suddenly seized with irregular and convulsive actions in the muscles of his neck, which drew his ear towards the sternal end of his collar-bone. Till I saw this case, I should scarcely have conceived it possible that the vertebral column in the human subject could be twisted to such a degree without injury to its fabric. The patient had been leeches and blistered, but the malady increased, and he was brought to London. I directed that he should be kept in a recumbent posture, with his head so supported as to require no effort on the part of the muscles which acted in so faulty a manner; for it must evidently be wrong to call upon muscles for exertion when they are either incompetent to act, or when their actions are conducted in a faulty manner. I also directed tepid fomentations to be applied over the con-

tracted and convulsively affected muscles, the compresses being covered with dry lint, so as to keep up a comfortable temperature, and produce the effect of a local tepid bath, being soothing to the feelings, and promotive of gentle perspiration. But our chief attention was directed to tranquillize and improve the state of the digestive organs, the functions of which were greatly disturbed, the tongue being extremely furred, and the discharges from the bowels very unhealthy. As this object was accomplished, the irritability of the muscles of the neck was relieved, so that in about eight days the patient was nearly well, and shortly afterwards recovered completely.

"I have seen cases of a similar nature gradually subside of themselves as the state of the patient's health became better. In general, however, wry-neck is a disease that is difficult to cure; for it is confirmed by habit, and at length by certain alterations of structure induced by its continuance*.

"The next case I shall relate is that of a medical gentleman, who lived freely, and paid very little attention to his alimentary organs. He was frequently admonished by a professional friend of his imprudence, and warned that some severe fit of illness would be the penalty of his irregularities. This warning was long neglected; but at last the calamity did come, and he found himself one morning deprived of the use of his right arm. He hastened to his adviser, and implored his assistance, promising that he would now strictly abide by his directions. Being provided with the medicines that were judged proper,—alterative doses of mercury and gentle laxatives,—and having a plan of diet prescribed to him, he left his friend's house. For nearly a week he derived no apparent benefit from the course suggested, when he was seized with a bowel complaint, and on a sudden found himself again in possession of the perfect use of his arm.

"In some cases, I have known the integuments of the chest so irritable as to be blistered by the slight friction of the clothes against them; and this state, as well as the spasms which occur in the

* There are different kinds of wry-neck, and produced by various causes. I here refer only to one kind of this disease.

intercostal muscles, and the pains that are felt in the pectoris of the thorax, can only be referred to disturbance of the functions of the dorsal portion of the medulla spinalis and its nerves. The pains which are felt shooting through the chest from the sternum to the vertebral column seem often to proceed from an affection of the phrenic nerve which lies on the oesophagus.

"The following case is an instance of a particular affection of the lumbar portion of the spinal cord and its nerves. A gentleman was brought to me from the country, whose lower limbs were completely useless from an atony of the parts supplied by the lumbar nerves. The sensibility of the pectoris of the abdomen was so much diminished, that he said he knew not that he had any bowels. The muscles on the front of the thigh were quite powerless, and the integuments over them benumbed; yet he could bend and extend his foot, and was perfectly aware when the parts below the knee were touched, circumstances which showed that the sacral nerves were not materially affected. The alimentary organs of this patient were greatly out of order, and I gave him such advice as I conceived might bring them into a regular and healthy state. He then left me, being carried out as he had been carried into the house, and I saw no more of him for a year, when he again called on me, strutting into the room in a very peculiar manner, and directing my attention to the ease and power with which he walked: 'I can walk as well as ever,' said he, 'and now I feel that I have bowels.' Recollecting the circumstances of this case, I told the patient he was not yet so well as he supposed, for I observed that the knees were constantly extended, and that, instead of bringing the foot straight forward, each step was made by swinging the whole limb round on the head of the thigh bone, which showed, if I may so express it, a kind of animal consciousness of the weakness of those muscles which are affixed to the knee-joint, and keep the 'pregnant hinges of the knee' from yielding under the weight imposed on them. As there remained considerable weakness of the extensor muscles on the front of the thigh, I said, 'there is one thing you cannot yet do, that is, stand with your knees bent.' On making the attempt, he would instantly have fallen to the

ground had he not supported himself with both his hands on a table that happened to be near him."

In the subject of diseases and injuries of the bones we have many very interesting observations, together with precise information, and well describing the nature of every ailment. It is impregnated with our nature itself to excite them; indeed, no anatomical or medical curiosity is peculiar to this country or is markedly more. In the latter class he brings a very good illustration of the insensible disposition to the formation of excrescences in different parts, which sometimes manifest itself

"In the disposition to a very general deposition of osseous substance must, notwithstanding the cases that now occur, be considered as a disorder of rather rare occurrence. I shall mention the particulars of an instance of it which I met with, as I shall then have an opportunity of communicating some circumstances I have noted both in this and other similar cases. A youth of about sixteen years of age was brought to me, whose back was greatly deformed by irregular humps of earthy matter heaped up upon the apertures and processes of the vertebrae. The hyomanium arches were united, so that his head was immovably fixed, being drawn backwards, and slightly inclined to one side. There were excrescences on the scapula of both sides, and the scapular margins of the scapula were converted into bone, and placed his arms as closely to his sides that it was difficult to insinuate the fold of a napkin between them and his chest. There was an excrescence on the pelvis, between the sacrum and os ischiurum, and various others had formed at different times and disappeared, but those which I have mentioned were permanent. Being a robust and spirited youth, he was disposed to exertion, and it, by a forcible effort to accomplish any purpose, which his unimpaired attention obliged him often to make, he accidentally struck his head, or any projection of a bone, a temporary deposition of earthy substance in the injured part was always the result. He had had the toothache a little before I saw him, and the remains of an excrescence, which had been considerable, still appeared on the lower jaw. Thinking that such observations could not be accounted as belonging to the bones, but were rather to be

his father had died of a similar disease, which began in the lip, and never ceased to spread till, to use the man's own expression, it ate into his windpipe, and destroyed him."

The constitutional treatment of ulcers is strongly insisted on; small doses of opium are recommended to allay irritability, and mineral acids to act as tonics; but cinchona seems to be the favourite remedy, especially in sloughing sores.

Local nervous affections are attributed to certain conditions of the brain, or of the digestive organs—or of the nerves of the part. The first is too obvious and too well known to require any illustration; the last also is sufficiently apparent—as where wound, pressure, or other local injury of a nerve occurs. The sympathetic influence of the digestive organs, though generally admitted, is at least not so palpable; and it is a part of the subject on which our author, of course, is quite at home. The cases are interesting, but appear to us to admit of explanation on other grounds than those assigned to them by Mr. Abernethy.

"Of late years I have been in the habit of relating various cases, to shew that disorders of the alimentary organs may produce, by affecting the several portions of the medulla spinalis, an irritable or a paralytic state of the nerves of the neck, of the arm, of the loins, and of the lower limbs. The first I shall detail is one of wry-neck. A young gentleman, when at school, was suddenly seized with irregular and convulsive actions in the muscles of his neck, which drew his ear towards the sternal end of his collar-bone. Till I saw this case, I should scarcely have conceived it possible that the vertebral column in the human subject could be twisted to such a degree without injury to its fabric. The patient had been leeches and blistered, but the malady increased, and he was brought to London. I directed that he should be kept in a recumbent posture, with his head so supported as to require no effort on the part of the muscles which acted in so faulty a manner; for it must evidently be wrong to call upon muscles for exertion when they are either incompetent to act, or when their actions are conducted in a faulty manner. I also directed tepid fomentations to be applied over the con-

tracted and morbidly affected muscles, the compresses being covered with dry flannel, so as to keep up a comfortable temperature, and produce the effect of a local tepid bath, being soothing to the feelings, and promotive of gentle perspiration. But my chief attention was directed to tranquillize and improve the state of the digestive organs, the functions of which were greatly disturbed, the tongue being extremely furred, and the discharges from the bowels very unhealthy. As this object was accomplished, the irritability of the muscles of the neck was relieved, so that in about eight days the patient was nearly well, and shortly afterwards recovered completely.

"I have seen cases of a similar nature gradually subside of themselves as the state of the patient's health became better. In general, however, wry-neck is a disease that is difficult to cure; for it is confirmed by habit, and at length by certain alterations of structure induced by its continuance*.

"The next case I shall relate is that of a medical gentleman, who lived freely, and paid very little attention to his alimentary organs. He was frequently admonished by a professional friend of his imprudence, and warned that some severe fit of illness would be the penalty of his irregularities. This warning was long neglected; but at last the calamity did come, and he found himself one morning deprived of the use of his right arm. He hastened to his adviser, and implored his assistance, promising that he would now strictly abide by his directions. Being provided with the medicines that were judged proper,—alterative doses of mercury and gentle laxatives,—and having a plan of diet prescribed to him, he left his friend's house. For nearly a week he derived no apparent benefit from the course suggested, when he was seized with a bowel complaint, and on a sudden found himself again in possession of the perfect use of his arm.

"In some cases, I have known the integuments of the chest so irritable as to be blistered by the slight friction of the clothes against them; and this state, as well as the spasms which occur in the

* There are different kinds of wry-neck, and produced by various causes. I here refer only to one kind of this disease.

intercostal muscles, and the pains that are felt in the parietes of the thorax, can only be referred to disturbance of the functions of the dorsal portion of the medulla spinalis and its nerves. The pains which are felt shooting through the chest from the sternum to the vertebral column seem often to proceed from an affection of the plexus of nerves which lies on the œsophagus.

“The following case is an instance of a particular affection of the lumbar portion of the spinal cord and its nerves. A gentleman was brought to me from the country, whose lower limbs were completely useless from an atony of the parts supplied by the lumbar nerves. The sensibility of the parietes of the abdomen was so much diminished, that he said he knew not that he had any bowels. The muscles on the front of the thigh were quite powerless, and the integuments over them benumbed; yet he could bend and extend his foot, and was perfectly aware when the parts below the knee were touched, circumstances which shewed that the sacral nerves were not materially affected. The alimentary organs of this patient were greatly out of order, and I gave him such advice as I conceived might bring them into a regular and healthy state. He then left me, being carried out as he had been carried into the house, and I saw no more of him for a year, when he again called on me, strutting into the room in a very peculiar manner, and directing my attention to the ease and power with which he walked: ‘I can walk as well as ever,’ said he, ‘and now I feel that I have bowels.’ Recollecting the circumstances of this case, I told the patient he was not yet so well as he supposed, for I observed that the knees were constantly extended, and that, instead of bringing the foot straight forward, each step was made by swinging the whole limb round on the head of the thigh bone; which shewed, if I may so express it, a kind of animal consciousness of the weakness of those muscles which are affixed to the kneecap, and keep the ‘pregnant hinges of the knee’ from yielding under the weight imposed on them. As there remained considerable weakness of the extensor muscles on the front of the thigh, I said, ‘there is one thing you cannot yet do; that is, stand with your knees bent.’ On making the attempt, he would instantly have fallen to the

ground had he not supported himself with both his hands on a table that happened to be near him.”

On the subject of diseases and injuries of the bones we have many very interesting observations, replete with practical information, and well deserving the attention of every surgeon. It is impossible with our narrow limits to extract them; indeed, we studiously confine ourselves to peculiar opinions or remarkable cases. To the latter class belongs a very good illustration of the inveterate disposition to the formation of exostoses in different parts, which sometimes manifests itself.

“As the disposition to a very general deposition of osseous substance must, notwithstanding the cases that are on record, be considered as a disorder of rather rare occurrence, I shall mention the particulars of an instance of it which I met with, as I shall thus have an opportunity of communicating some circumstances I have noted both in this and other similar cases. A youth of about fourteen years of age was brought to me, whose back was greatly deformed by irregular hillocks of earthy matter heaped up upon the spinous processes of the vertebræ. The ligamentum nuchæ was ossified, so that his head was immovably fixed, being drawn backwards, and slightly inclined to one side. There were exostoses on the os brachii of both arms; and the tendinous margins of the axillæ were converted into bone, and pinioned his arms so closely to his sides that it was difficult to insinuate the fold of a napkin between them and his chest. There was an exostosis on the pelvis, between the sacrum and os innominatum, and various others had formed at different times and disappeared, but those which I have mentioned were permanent. Being a robust and spirited youth, he was disposed to exertion; and if, in a forcible effort to accomplish any purpose, which his manacled situation obliged him often to make, he accidentally struck his head, or any projection of a bone, a temporary deposition of earthy substance in the injured part was always the result. He had had the toothache a little before I saw him, and the remains of an exostosis, which had been considerable, still appeared on the lower jaw. Thinking that such disorders could not be accounted as belonging to the bones, but were rather to be

regarded as the effect of a prevalent disposition in the system to eliminate, from the circulation and deposit of the earth of bone upon the excitement of inflammatory actions, I wished to know whether this depended on the modes of action which the affected parts assumed, or on a too great redundancy of the earthy principles of bone in the circulating fluids. With a view to come to a conclusion upon the latter point, I examined the urine of this youth, and found that the oxalate of ammonia produced scarcely any perceptible precipitation of lime. On dropping in lime-water, a faint but permanent cloud of phosphate of lime was produced. In the urine of another person, on the contrary, abundance of oxalate of lime was thrown down by the addition of oxalic acid, and copious clouds of phosphate of lime were produced by the addition of lime-water; so redundant, indeed, was the phosphoric acid in this urine, which I believed to be healthy, that these clouds were several times re-dissolved before the acid was completely saturated, and the precipitate became permanent. Two years after the time I first saw him, the youth came to London again, and the exostoses which I have described seemed to be pretty much in the same state; several new ones, however, had formed on the extremities; one, in particular, extended itself from the pelvis along the thigh in the direction of the sartorius muscle, and impeded the motions of the limb. The urine was again repeatedly examined by myself, and, among several others, by Sir Humphry Davy, and with the same results as before. I now directed him to take, in divided doses, 3j. of phosphoric acid daily, dissolved in such a quantity of water as it would slightly acidulate, with the addition of some sugar. Whilst he continued this medicine his urine resembled that of other persons, containing the usual proportion of phosphate of lime, with a surplus of phosphoric acid. After about a month the patient discontinued the medicine, without, however, apprising me of what had been done; yet I detected it immediately, by finding neither lime nor phosphoric acid in the urine, as I had done at my last visit. I argued against the absurdity of this conduct, but in vain. The patient and his friends de-

termined that no more medicine should be taken.

"I have, in several slighter cases of a tendency in the system to osseous deposition, which occurred in the hospital, remarked the same deficiency of lime and phosphoric acid in the urine.

"I have, however, met with other cases of exostosis where the depositions of bony matter were numerous, and of a large size, in which there was no want either of lime or phosphoric acid in the urine."

The necessity of delaying the application of blisters till the acute stage of inflammation has passed away, is generally admitted, but not always acted upon. The point is alluded to by Mr. Abernethy, and illustrated by a case, in which convulsions and spasms in the limb were excited by applying a blister to an inflamed joint at too early a period.

Fractures and dislocations are treated of at considerable length, and in a manner entirely practical. One quotation more, and we have done: it exemplifies well the happy manner in which our author used to seize upon the attention of his hearers, and make an individual case, told in a humorous manner, the means of illustrating some general principle. He has been insisting on the advantage of gradual but unremitting extension in reducing dislocations:—

"Passing through the square of St. Bartholomew's Hospital one summer afternoon, when the weather was very warm, I observed a number of students standing at one of the doors wiping the perspiration from their faces, and panting from heat and exertion. They told me they had been trying for an hour to reduce a dislocated shoulder without avail, for the strength of the patient was immense. The man was a coal-heaver, and his muscles were so bulky that they appeared to me to equal those of the Farnese Hercules; nevertheless, he appeared to be nearly as much exhausted as his medical attendants. Being unwilling to lose what appeared a very favourable opportunity for attempting reduction, I asked the patient if he would allow me, upon the following conditions, to try to replace the bone:—1st, That I should give him no pain; and 2d, that the attempt should not be continued longer than ten minutes. He consented to my proposi-

tion with a smile. Having fixed the trunk of the body and lower costa of the scapula by means of a sheet, I applied a napkin above the condyles of the os brachii; and having twisted it so as to fix it completely, gave the ends to two of the heaviest of the students present, telling them to be sure to prevent the napkin from becoming untwisted and slipping over the elbow-joint, and, having brought the ends of it close to their own bodies, to lean their weights upon them; for this force I knew they could continue unremittingly without fatigue. This being done, I inquired of the patient whether he was in any pain, the first condition being that he should suffer none. He having answered in the negative, I looked at my watch and said, 'Now, sir, ten minutes are all I shall require;' and he smiled in derision, saying it would never answer. But before five minutes had elapsed he expressed himself in a very impatient tone, earnestly desiring that the effort, which he was sure would be unavailing, might be discontinued. I reminded him of our compact, showed him my watch, and told him the time would soon elapse. In two minutes more he declared very angrily that he would not endure it any longer, said he should faint, and at that moment the bone slipped into its socket."

It would be easy to multiply quotations calculated to interest our readers, but we must refer them to the volume itself. Those who possess Mr. Abernethy's "Surgical Observations" ought to procure the present volume, to make their copy of his works complete. Those who have not his former publications will find in this an epitome of the opinions and practice of one whose name will go down to posterity as that of one of the most eminent surgeons of the period at which he lived.

ANALYSES OF BRITISH MEDICAL JOURNALS.

EDINBURGH MEDICAL AND SURGICAL JOURNAL.

January 1830.

[Concluded from page 656.]

RESUMING our analysis of the principal articles contained in the last number of

the Edinburgh Medical and Surgical Journal, we next come to some interesting cases of poisoning.

Art. VIII. *Case of Poisoning by Arsenic*, By HUGH WARD, M.D. *Death at the end of a week—continued vomiting insufficient to empty the stomach of the arsenic—peculiar appearance of rugæ on the inner surface of that viscus.*

In this case about three drachms of arsenic were taken, seventeen hours after the last preceding meal. The individual lived seven days, and then died apparently of the secondary effects of the poison on the stomach. The case is important, as shewing that copious, active, and long-continued vomiting, is sometimes inadequate to the removal of all the poison from the stomach, or to prevent its subsequent detection there in quantity sufficient for chemical analysis; and as having presented a peculiar appearance of rugæ or thick corrugated patches, as large as half the little finger. These are stated by Dr. Christison, who comments on the case, to have been formed by blood "minutely extravasated, and incorporated with the cellular tissue between the villous and muscular coats." It is an appearance which the Doctor thinks is never produced by natural causes. Pyl and Metzger have mentioned similar cases; and, in fact, the appearance does not seem to have been uncommon.

Art. IX. *Cases and Observations in Medical Jurisprudence.* By R. CHRISTISON, M.D. &c. &c.

Simultaneous poisoning of six persons—the Test of Reduction may supply evidence when the quantity of metal sublimed is less than a 250th part of a grain, and is too minute to form a characteristic crust.

On the 1st of Nov. last a party, consisting of the family of a Baronet in Roxburghshire, and some visitors, were taken ill during dinner, being seized with sickness, vomiting, and severe pain of the bowels, soon followed by diarrhoea; the vomiting was encouraged by drinking warm water, and continued till next morning. All the sufferers had a sense of heat in the stomach, throat, and mouth; and next day the skin of the lips cracked and peeled

Several days elapsed before any of the party regained the least inclination for food.

That poison had produced this event could not be doubted, from its simultaneous occurrence in so many individuals—amounting to six in number. The various articles of food and drink which had been used were therefore subjected to analysis; these, however, did not shew any trace of poison, and recourse was now had to an examination of the matters vomited. What follows constitutes the interesting part of the case—namely, the extremely minute quantity of arsenic that was detected.

“The next article examined was the vomited matter. Two quarts of this were sent me. It was taken from a pail which contained about four gallons,—the matter vomited by four of the party. A small portion of this when filtered gave no indication of any of the above metallic poisons on being treated with sulphuretted-hydrogen. But when the whole filtered fluid was evaporated to the volume of two ounces, sulphuretted-hydrogen produced a dirty yellowish cloudiness, which, after ebullition and subsequent rest for twelve hours, gave place to a scanty, Naples-yellow, flaky precipitate. This precipitate was separated and washed by the process of subsidence and affusion repeatedly performed, and was then dried in a watch-glass. The product, which was very small in quantity, and of course contained a large proportion of animal matter, was then subjected to the process of reduction in one of the small tubes recommended by Berzelius. By slow and cautious management of the heat, a scanty sublimate was procured, forming a dark, filmy cloud, on a small part of the narrowest portion of the tube. This sublimate was entirely destitute of brilliancy on the outside, or of crystalline appearance on the interior; and consequently without the subsequent test of oxidation, suggested lately by Dr. Turner, no conclusion whatever could be drawn from it. But on removing the portion of the tube containing the flux, and then subjecting the film to repeated sublimation, a ring of fine sparkling white crystals was formed, on some of which I could observe with a common magnifier triangular facettes. I could hardly doubt, therefore, that I had procured a minute quantity of oxide of arsenic. But as the quantity was so

small, that, being in the custom of weighing somewhat larger quantities, I was sure it did not amount to nearly a 250th part of a grain, I resolved to subject it to a farther test. With this view two drops of water were introduced into the tube, and boiled on the crystals. These were soon dissolved, and in the solution the ammoniacal nitrate of silver caused as characteristic a lemon-yellow precipitate as it could produce in any arsenical solution.”

Some doubt might possibly have hung over the case, from the extreme smallness of the quantity of arsenic thus discovered; but fortunately it was remembered that all the party had partaken of a bottle of champagne, a portion of which remained; and which, though it had no unusual taste, gave on the application of sulphuretted hydrogen a copious yellow precipitate. It contained a grain in two ounces, and this is probably about the quantity which each individual may have taken of it.

A case of *Poisoning with Opium* follows. It illustrates the process for detecting opium in mixed fluids, and shews the uncertainty of chemical analysis in detecting opium, even where a large quantity of that drug has been taken.

The last case is curious, and we shall give it at length.

“*Poisoning with the common Elder. —Enteritis produced by the leaves, and narcotic symptoms by the flowers.—Fragments of the leaves discharged by the bowels five days after they were swallowed.*—On the afternoon of the 17th May 1828, two boys, while amusing themselves in the neighbourhood of Edinburgh, ate, one of them the flowers, and the other the flowers and leaves, of the common elder. One of them, William Ross, eight years of age, was well enough when he returned home about two hours afterwards. But during dinner, which he took immediately on his return, he began to complain of severe griping. In the evening the griping still continued, he became also hot and feverish, and he had excessive tenderness over the whole belly. Next morning the symptoms were unabated, and in the course of the subsequent day and night the tenderness of the belly became so great that he could not allow it to be touched, while the tormina recurred with violence every half hour. He had

also soreness of the mouth and throat. On the morning of the 19th he was for the first time attacked with vomiting, which returned frequently in the course of the day, and towards evening was tinged with blood.

"His mother being then for the first time told that he had eaten some leaves on the 17th, sent for a surgeon on the morning of the 20th, who gave him calomel and three successive injections, to move his bowels, but with hardly any effect. The symptoms on the evening of the 20th continuing unabated, she carried him to the Royal Infirmary here, where he became my patient.

"When he was first admitted, the belly was very tense, much swelled, and exceedingly tender. The pulse was frequent and small, the face flushed, the tongue clean. He was immediately ordered an ounce of castor oil, an emollient injection, twenty leeches to the belly, the warm bath, and constant fomentations. Much relief was derived from the leeches and the warm-bath; and next morning the swelling and tension of the belly were considerably diminished. The bowels not having been moved by the castor oil, two doses of ipecacuan were ordered, which caused both vomiting and several alvine discharges. The matter discharged was unfortunately not kept by the nurse. When I first saw the boy the same day at the visit hour of the hospital, I found the belly still tense and excessively tender; and he was affected with occasional hiccup and constant pain in the bowels, varying, however, in severity. The pulse was 140, full, and rather sharp; the tongue furred on the centre, and the skin rather hot. A large blister was immediately applied over the upper part of the belly, the warm-bath was repeated, an emollient injection was administered, and directions were left to take blood from a vein in the evening, if the symptoms should not be much mitigated. But he was so much relieved by the bath that venesection was considered unnecessary. The hiccup ceased, and the griping became much less frequent.

"Next morning, the 22d, I found that although he had passed a restless night, owing to the blister, yet the pulse was 108 and soft. He had passed two copious stools, consisting of broken down faeces, mixed with a considerable quantity of small fragments of leaves.

The fragments were so small that the plant to which they belonged could not be recognized; but the boy's companion brought me a branch of the tree from which the leaves they ate had been taken; and it proved to be a branch of the common elder. The warm-bath was directed to be repeated whenever the tormina were troublesome, and the emollient injection was also again administered. On the 23d the griping occurred very rarely. He had passed five loose feculent stools, in which fragments of leaves were no longer to be seen. During the two subsequent days he had frequent loose stools without medicine. All the symptoms continued to abate. On the 27th the stools were becoming again firm, and no pain was felt in the belly on firm pressure. The pulse, however, continued above 100, and the skin hot. On the 1st of June the stools were natural in consistence, and his complaints were all gone except weakness. As his parents wished to take him home, he was dismissed.

"The other boy, Thomas Paterson, eleven years of age, ate the flowers only of the same tree by which Ross had been poisoned. During the remainder of the day he had no complaint; but in the course of the night he had violent headache; next morning he was very giddy when he rose; and in the forenoon the giddiness increased so much that he staggered in walking, like a drunken man. A laxative administered at this time caused both vomiting and purging. Nevertheless the headache returned violently at night, and on the morning of the 19th he was still so giddy that he could not walk. In the course of that day he got gradually better, and next morning was quite well. He never felt any pain, never had any sickness except when he took the laxative, and took his meals all the time as usual."

The only other article possessed of any interest is one

On the Efficacy of Water-dressing, or the Utility of Water as an application in the treatment of Wounds, Ulcers, Diseases of the Skin, &c. By JOHN M'FADZEN, M.D. Surgeon, Buttevant.

After some preliminary remarks, in the course of which the author informs

us that the practice originated with Patroclus at the siege of Troy, and was revived by Dr. Macartney, the mode of its application is thus described:—

“The mode of applying this remedy is exceedingly simple, and fortunately attended with very little trouble. A piece of lint dipped in cold water is to be applied with the soft side to the part, and covered with oiled silk, which should extend considerably beyond the limits of the lint, and be retained in its place by a light bandage, or any other means the practitioner may deem proper. Any other substance capable of preventing evaporation, and sufficiently light and pliable, such as very thin Indian rubber, would answer the purpose as well as oiled silk. The dressings should be removed three times a-day, or less frequently if the secretions from the part are trifling, for the purpose of wetting the lint as it becomes dry, and freeing it from the secretions of the wound or skin, which would in a short time become irritant; therefore, it is not sufficient that the lint should be merely moist, for this moisture may be occasioned by perspiration or other discharge of the part collected under an impervious substance. Hence the lint must either be occasionally removed, or well washed in cold water, and in like manner the oiled silk or Indian rubber.

“From what has been stated, it must appear that the good effects of this treatment depend on the production of steam at the temperature of the surface of the body, which, being retained by the impervious silk, subjects the part constantly to an atmosphere of that vapour.”

Numerous cases are given in illustration: they chiefly consist of incised, contused, and lacerated wounds; sloughing, carbuncle, and erysipelas; and we need scarcely add that they did well, for they are given to prove the efficacy of the treatment.

PHRENOLOGY.

To the Editor of the London Medical Gazette.

SIR,

ACCIDENTALLY casting my eye over your Gazette of the 6th of March, I

found I had before overlooked a letter expressing great wrath about a little passing fling at the doctrines of cranio-logy in the review of Dr. Pring's work of the preceding number. I can only account for the oversight by the letter being indexed “Phrenology;” and not having the least notion that such an article contained a complaint that the reviewer had induced you to deviate from the sound judgment and correct feeling which usually characterizes your journal, by his having spoken somewhat sceptically and irreverently of phrenology. I feel confident that every one who reads the passage quoted in the letter signed “a Phrenologist,” must agree with yourself in denying that there is any thing in it which merits the appellation of “abuse.” Were it otherwise I am sure you would not have admitted the passage into your columns; and I trust I shall never be betrayed into abusive language when analyzing a scientific work or writing for a scientific journal. I consider your correspondent's charge to have been made hastily and inconsiderately, and to have failed. I have no right to abuse either a doctrine or its supporters. But, as touching phrenology, I hold it lawful game, and that “*dulce et decorum est*,” to hold it up to ridicule; and therefore I lauded the celebrated article of the Edinburgh Review; and was indeed, as your correspondent suggests, dazzled by its wit, as well as strengthened by its arguments in my original persuasion.

“A Phrenologist” reminds “the reviewer” that the objectionable passage “is neither criticism nor argument.” “The reviewer” assures “a phrenologist” it was not intended for either one or the other; and he will see the reason, in the conclusion of his quotation, why he did enter into the argument. “A Phrenologist” asks—“if the doctrines of phrenology be so palpably absurd, what are they who uphold these doctrines?” I answer, like the echo, what are they? Are they anatomists, physiologists, or pathologists of repute, as men of practical habits and common sense? Your angry correspondent tells us they are partly composed of men “of high intellect, extensive literature, and unbending integrity,” of which he says there are many. I should be glad to know who are the rest. I think I can fill up the “hiatus bene defendendus” with a long list of blue stocking ladies,

Scotch graduates, reading apprentices, and members of debating, literary, and scientific, grand central, and branch junction societies. Your correspondent, I have no doubt, belongs to the class of high intellect, extensive literature, and unbending integrity; I would I could place him on the dispassionate list, but I fear this is a very small one among the phrenologists. As to unbending integrity, the whole body seems possessed of this amiable trait; and I may safely challenge the "book of holy martyrs" itself to produce examples of greater firmness and devotion than the true phrenologists assume. Your correspondent seems to consider it a sort of *sequitur* that if the doctrine be considered as absurd, the author and abettors must be so also. Really, sir, as our late premier expressed himself, "this is what I call too bad." I must reserve for myself and others the right of thinking and calling the doctrines of phrenology absurd; but it would indeed be uncourteous to extend the phrase to its supporters, whatever may be our private opinions. That the doctrines in question are ingenious, interesting, and captivating, no one can deny; and they are just calculated to entrap the understandings of the highly intellectual and the literary. These are just the kind of characters to seize them, and the little additions I suggested are just the kind of characters to follow them; and of such materials are the phrenological societies generally constructed, barring the blues, who, from their sex, are (unhappily) excluded from the proceedings and transactions of the meetings; though they are not idle at home with their mapped casts of heads, and can usually put their fingers upon either wit, merit, adoration, adhesiveness, or philo-progenitiveness, &c. without the least hesitation, and calculate to a nicety the faults, virtues, and propensities of their friends, if they be but careless enough to expose their heads uncovered for an instant in the presence of a phrenological young lady. But if I am, unhappily, insensible to the "truths" of phrenology, it is my misfortune, not my fault; and in expressing my accordance with Dr. Pring's resolution not to extend his criticisms any farther, I simply did so as his reviewer, having no intention whatever of putting my grains of argument in the scale against the "mass of phrenological evidence."

Your correspondent hopes that when I again think fit to denounce phrenology, I will condescend to adduce some ground, or fact, or reasoning, &c. As he gives me the choice of three modes, I will select the first only, as the two last would render the disputation probably interminable. The ground, then, of that assertion which he deems to be incompatible both with sound philosophy and urbanity (this is the hardest cut of all), is this—that "the doctrines" are, in my opinion, based upon forced and doubtful facts, and casual coincidences; and are alike at variance with anatomical and physiological truths, and inconsistent with common sense.

One word more to the phrenologists, and I have done. I recommend them to adopt this motto upon their seal:—"Those who live in glass houses should be careful of casting stones."

Your constant reader, &c. &c.

AN ANTI-PHRENOLOGIST,
And the Reviewer of Dr. Pring's Work.

MEDICAL SERVICE OF THE EAST
INDIA COMPANY.

*To the Editor of the London Medical
Gazette.*

SIR,

I CANNOT refrain from expressing my surprise, that the well-founded complaints of our professional brethren in India have not attracted more attention in this country. True it is that the policy of the reductions made in the allowances of the Company's officers has been generally discussed in the *Times* and other papers, and the conclusion forced upon the observer is, that a positive breach of faith has been committed by the Company. This argument applies with tenfold power to the case of the Medical Officers, and the peculiar hardships which they are suffering, from the withdrawal of the medical contract, &c. amounting to a reduction of salary equal to 30 per cent. will, I am satisfied, procure for them the fair assistance and protection of the *Medical Gazette*.

I beg of you, sir, to consider in the first place the situation of the complainants; in a distant country, without

the means of making their grievances known: this circumstance of itself makes a strong appeal in their favour to the sympathy of the professional public of Britain, which will not be diminished when I inform you, that the medical officers of the largest division of the Bengal army were not allowed to hold a meeting for the purpose of determining on the best mode of remonstrating with the Directors on the injustice done them. Permission was asked, and it was refused. "*Licet etiam mihi dignitatem artis medicæ tueri;*" and I cannot look at the present condition of the surgeons in the Company's service without feeling that the dignity of the medical art has been wounded by the treatment inflicted on them. I have lately perused a very instructive document, "*The Memorial of the Medical Officers of Bengal to the Directors,*" praying that redress may be afforded them—that they may be exempted from the ruinous effects of the sweeping reductions now in progress; and a more manly, temperate, but forcible appeal, cannot be made to the consciences of men. They plead in that document, as grounds of exemption, their entire reliance on the faith of the Company on entering the service—the expensive education and advanced age at which they must of necessity enter it—the slowness of medical promotions when compared to military—the greater expenses incurred by frequent journeys across the country, from one district to another—the smallness of their retiring pensions—and their greater absolute labour than military officers or civil servants. In addition, they complain that they do not receive that respect to which they consider themselves entitled, and that their total remuneration is *less* than that of the veterinary surgeon, although they do much greater duty. Every letter which I have seen of late reiterates the same complaints, and expresses the most galling disappointment. They say, "*We have left our native country on the faith of the Company's promise to give us a certain income for a certain period of service, and we feel that it is cruel and oppressive to take advantage of the helpless situation into which our misplaced confidence has betrayed us.*" To show that this charge is well founded, I will quote a sentence from the covenant executed by the assistant surgeon on entering the service:—"and

he, the said A. B., shall continue during the said term to exercise such employment according to the utmost of his skill and ability,—in consideration of such stipends and allowances as have been usually paid or allowed." There can be no mistake as to what these stipends and allowances are—they are published under the authority of the Directors in the *East India Directory*. Can any thing be plainer than that this "*consideration*" has been wantonly disregarded? If this pledge be broken, what security has the medical officer that in the next year some farther paring down of his salary ("*stipend and allowance*" if you please) will not be attempted—and when is it to stop? Take it or leave it is the answer; but such is the answer of power setting equity at defiance. Will any well-educated surgeon henceforth expose himself to such risk? Will the friends of any such person seek it for him? Will the appointment of assistant surgeon in the *Honourable Company's* service be regarded as a *prize* by the industrious student? These are considerations of importance for the Company and the profession, and never let the old maxim, "*Fiat justitia,*" &c. be forgotten. If the Company find it necessary to reduce their expenditure, let it be a prospective reduction, but let it not cut down the hopes and plans of men with whom they have already pledged themselves to abide by such certain "*allowances as have been usually paid or allowed.*"

It is confessed on all hands that a surgeon in the Company's service (even if unmarried) can now save nothing; and if married, must get involved in debt. I will not venture to transcribe the terms in which my correspondents in India have expressed their indignation at the conduct of the Directors; but of this I am sure, there is a spirit of combination and discontent universally prevailing, from which the worst consequences must be apprehended.

There are some other points involved in this outline to which, with your permission, I will at another time revert.

A SUBSCRIBER.

March 12, 1830.

COMPARISON OF DAVY AND WOLLASTON.

It is impossible to direct our views to the future improvement of this wide field of science, without deeply lamenting the privation which we have lately sustained of two of its most successful cultivators—Sir Humphry Davy and Dr. Wollaston; at a period of life, too, when it seemed reasonable to have expected from each of them, a much longer continuance of his invaluable labours. To those high gifts of nature which are the characteristic of genius, and which constitute its very essence, both those eminent men united an unwearied industry, and zeal in research, and habits of accurate reasoning, without which even the energies of genius are inadequate to the achievement of great scientific designs. With these excellencies, common to both, they were nevertheless distinguishable by marked intellectual peculiarities. Bold, ardent, and enthusiastic, Davy soared to greater heights; he commanded a wider horizon; and his keen vision penetrated to its utmost boundaries. His imagination, in the highest degree fertile and inventive, took a rapid and extensive range in pursuit of conjectural analogies, which he submitted to close and patient comparison with known facts, and tried by an appeal to ingenious and conclusive experiments. He was imbued with the spirit, and was a master in the practice, of inductive logic; and he has left us some of the noblest examples of the efficacy of that great instrument of human reason in the discovery of truth. He applied it, not only to connect classes of facts of more limited extent and importance, but to develop great and comprehensive laws, which embrace phenomena that are almost universal to the natural world. In explaining those laws, he cast upon them the illumination of his own clear and vivid conceptions;—he felt an intense admiration of the beauty, order, and harmony, which are conspicuous in the perfect chemistry of nature;—and he expressed those feelings with a force of eloquence which could issue only from a mind of the highest powers, and of the finest sensibilities. With much less enthusiasm from temperament, Dr. Wollaston was endowed with bodily senses of extraordinary

acuteness and accuracy, and with great general vigor of understanding. Trained in the discipline of the exact sciences, he had acquired a powerful command over his attention, and had habituated himself to the most rigid correctness, both of thought and of language. He was sufficiently provided with the resources of the mathematics to be enabled to pursue with success profound inquiries in mechanical and optical philosophy, the results of which enabled him to unfold the causes of phenomena not before understood, and to enrich the arts, connected with those sciences, by the invention of ingenious and valuable instruments. In chemistry, he was distinguished by the extreme nicety and delicacy of his observations; by the quickness and precision with which he marked resemblances and discriminated differences; the sagacity with which he devised experiments, and anticipated their results; and the skill with which he executed the analysis of fragments of new substances, often so minute as to be scarcely perceptible by ordinary eyes. He was remarkable, too, for the caution with which he advanced from facts to general conclusions; a caution which, if it sometimes prevented him from reaching at once to the most sublime truths, yet rendered every step of his ascent a secure station, from which it was easy to rise to higher and more enlarged inductions. Thus these illustrious men, though differing essentially in their natural powers and acquired habits, and moving independently of each other, in different paths, contributed to accomplish the same great ends—the evolving new elements; the combining matter into new forms; the increase of human happiness by the improvement of the arts of civilised life; and the establishment of general laws, that will serve to guide other philosophers onwards through vast and unexplored regions of scientific discovery*.

BIOGRAPHY

OF

GEORGE PEARSON, M.D. F.R.S.

Few men of the present age have contributed more highly to the progress of science—of chemistry in particular, as well as of the practice of medicine on sound principles, than the amiable indi-

* Henry's Chemistry.

vidual who is the subject of the following biographical notice.

Being intended for the profession of medicine, he studied at Edinburgh and Leyden, and settled in early life in the practice of his profession in London. He was some years after elected Physician to St. George's Hospital; became a Fellow of the Royal Society in 1791, and was repeatedly chosen of the Council.

As a lecturer, Dr. Pearson was plain, distinct, comprehensive, and impressively energetic; and on many occasions he was argumentative, often witty, and even eloquent, when a favourite subject was the object of display.

To his pupils he was kind and communicative, and even in his common conversation there was such a degree of deference and friendly (fatherly, we might say,) feeling to those who were attentive to him, that his pupils were generally much attached to him.

His lectures on therapeutics and *materia medica* were the most instructive at that period given in London; and he took great pains to point out, as far as was then ascertained, the principles of action of medicines, and their peculiar properties and doses. Thus far he went, preferring general principles to that cramped method of instruction, of giving prescriptions for supposed cases; since no two cases of diseases occur, corresponding in every distinctive symptom and particular.

In some respects he may have been deemed eccentric; but, to make a long lecture on a dry subject appear short, as well as with the view of impressing it on the mind of his hearers, he frequently introduced anecdotes, often droll, yet generally possessed of some pithy meaning connected with the subject of lecture.

The great and inestimable value of his lectures on the practice of physic was, that it rendered his pupils independent of the shackles of nosological forms, by teaching principles, or giving the outlines of diseases, to be filled up by future experience in practice.

In his lectures on the principles of medicine, and on the practice of physic, although he dwelt for a greater length of time than the generality of students like to devote to an abstruse and difficultly-acquired subject, yet there was much future practical good to be derived from his then supposed tire-

somely tedious topic, "Excitability;" for it was calculated to impress principles productive to the hearer of the greatest benefit when, in after-life, at the bedside of sickness.

As regards chemistry, many of Dr. Pearson's early pupils are still attached to his grammar-like mode of teaching that science, by first instructing the pupil in the properties of simple substances; and, as the mind expanded, then the more complex union of simple substances, hinting at their affinities; and ultimately, when the student was in a state capable of comprehending them, pointing out the laws which govern chemical attraction.

His favourite subjects were excitability; cow-pox as a substitute for small-pox; fever; diseases of the lungs; tubercles. In chemistry, the decomposition and recomposition of water; the decomposition of carbonic acid in carbonates, and the separation of their carbon; steel, and its carbon; antimonial powder of James; the proof that alcohol exists in wine, as a product of fermentation, and not of the process of distillation, by which it is separated.

Dr. Pearson had a habit, when much absorbed and very intent on his subject, or whenever he was more particularly desirous of recollecting a particular object or remarkable circumstance, of pushing up his spectacles, or of taking them off and on, holding them in one hand; and in this way he would repeat the same word or sentence many times, till at length his stores of "mental lore" were regularly assorted and found ready for delivery; he would then amply make up to his hearers for their lost time and patience, by going on in a powerful strain of energetic language, when he would, on a sudden recollection of the time, abruptly terminate his lecture by a favourite annunciation of "but more of this subject to-morrow, gentlemen."

Dr. Pearson was devoted to Shakespeare, was in the constant habit of quoting him, and has left in manuscript some clever commentaries on the great dramatic bard. He and Kemble knew each other at Doncaster, and their intimacy continued long after. Dr. Pearson was also very intimate with Horne Tooke and Sir Francis Burdett; so much so, that he was considered by many as a party man; but, in truth, he never interfered with politics, and has

been heard to declare his complete ignorance of them, which, considering his numerous professional avocations, was perfectly accountable and natural. Dr. Pearson was acknowledged, by good judges, to be a sound Greek and Latin scholar. He was a hospitable landlord, a disinterested friend, and a very good-humoured and jocose companion: he abounded in anecdotes, which he told with excellent effect. He would often observe to his friends, that he knew he was growing old; but that he had made up his mind to die "in harness."

The circumstances of Dr. Pearson's death were peculiarly melancholy. It took place at his house in Hanover Square, on Sunday, November 9, 1828, in consequence of a fall down stairs. Notwithstanding his great age, Dr. Pearson was indefatigable in the pursuit of study, and sat up every night later than any person of his family. On the night preceding his death, he remained, as usual, the last up. When the footboy got up and came down early on Sunday morning, he found his master's candlestick and the extinguisher at the top of the first flight of stairs, and on going down lower, he heard a loud breathing, which alarmed him so much, that he ran back to the attics for a fellow-servant, with whom he returned to ascertain the cause. On reaching the bottom, they discovered their unfortunate master on the ground at the entrance of the hall, breathing still heavily, but senseless, and with a large wound on his head, from which a quantity of blood had flowed. He was taken immediately to his bed, and medical aid procured. In the course of the day he recovered his consciousness, but expired towards the evening. It is supposed that he was seized with giddiness, and fell backward on reaching the top of the first flight of stairs, and rolled down to the bottom without being able to call for help, or without the noise of his fall being heard*.

[Here we terminate our biographical notices of eminent members of our profession recently deceased: the present volume contains rather a melancholy list; for in it will be found the names of Davy, Wollaston, Young, Pearson, and Gooch.]

PHYSIOLOGY AS CONNECTED WITH ATMOSPHERICAL INFLUENCE.

By HARDWICKE SHUTE, M.D.

(Continued from page 749.)

We have endeavoured, in the former part of these observations, to shew that the whole of the oxygen expended in respiration is absorbed, and converted by an animal process into an animal principle, capable, when united with the blood, of contributing to the support of living action. Now it is almost unnecessary to state that a corresponding principle, endowed with the same property, and existing in arterial blood, has long been recognized by physiologists under the title of arterial influence. Assuming therefore, for the present, the correctness of this term as applied to the principle under consideration, we have now to inquire in what manner the arterial influence contributes to the support of muscular contraction, or, to speak in more general terms, of living action.

It is essential to the existence of every living action, that there be an aptitude in the organ to be excited into action, and an agent by which the action is excited. "Every operation of the vital energy is called an action; whatever agent excites this action, is called a stimulus; the aptitude of the system to be acted on has been expressed by the term irritability." "All muscular motion implies two things—the irritability on which the contraction of the muscle depends, and the stimulus which determines the irritability to act." It is obvious, therefore, that the acknowledged correspondence between the supply of florid blood and the contraction of the heart, requires for its explanation a satisfactory answer to the following question. Does arterial blood contribute to the action of the heart by supporting its irritability without exciting its contraction, by exciting its contraction without supporting its irritability, or by the double agency of exciting its contraction and supporting its irritability? Now this correspondence between the supply of florid blood and the contraction of the heart was no sooner established, than physiologists, directing their attention to the cause of this phenomenon, severally adopted the above explanations. "May not vital air,

only ; and therefore it is clearly impossible to prove the existence of this substance as a component part of the animal structure. But the structure of a living organ is altogether unknown to the physiologist, and therefore every opinion upon this subject must be considered as having a claim upon our assent in the ratio of its probability, and its capability of being reconciled with the phenomena of life or of living action.

Consistently with this view of the subject, the correspondence between the supply of oxygen and the contraction of the heart, admits of the following explanation. The irritability of the heart is a property of its structure, and a supply of oxygen is necessary to the continuance of this property, because necessary to that perfection of structure upon which the property is dependent. We are not, it may be remarked, advancing a new opinion upon this subject, but merely stating our reasons for adopting this explanation of the phenomenon in question, in preference to many others which have been proposed, and more particularly that which attributes the contraction of the left side of the heart to the stimulant quality of arterial blood. "It was long supposed that the cessation of respiration occasioned that of the heart's motion, in consequence of the black blood not having sufficient power to stimulate its fibres; but does not the right side of the heart, which, under all circumstances, contains deoxygenated blood, contract with a vigour equal to that of the left? It was reserved for Bichat to offer a true explanation of this phenomenon. He has very justly stated that, in consequence of the suspension of the respiratory function, the coronary vessels, by which the muscular structure of the heart is supplied, are compelled to carry black instead of scarlet blood; a fact which, in itself, is quite adequate to explain the cause of the heart ceasing to contract; for the irritability of this, like that of every other muscle, can alone be maintained by duly oxygenized blood." This explanation of the French physiologist is, however, so nearly allied to that proposed by Mr. Coleman forty years ago, that we have considerable hesitation in admitting that it was reserved for Bichat to make the discovery. "As soon," says Mr. Coleman,

"as the blood has undergone the change in the lungs, it is rendered fit to support the heat and irritability of the animal. This depends on the coronary vessels being supplied with blood that has received a quantity of heat (in other words, oxygen which is considered to be the source of heat) from the air, and which these vessels distribute alike to the right and left side, and consequently give an equal increase to the irritability of both." It is almost unnecessary to add that, in our opinion, "the stimulus which excites the heart to act is the same in all its cavities, and this principally is distention."

If the correspondence between the supply of oxygen and the contraction of the heart can be thus reconciled with the acknowledged correspondence between the supply of oxygen and the nutrition of the heart, it is both irrational and irreconcilable with the rules of sound logic, to imagine the operation of another and a second cause. This objection to the imagined operation of a second cause would not be altogether removed by the circumstance of such operation being attended with no other difficulty; but we shall now endeavour to shew that this other cause, so questionable in itself, is rendered still more so by the many difficulties and incongruities to which it gives rise. If we consider the contraction of the heart to be excited by the stimulant quality of arterial blood, we are under the necessity of assuming that the heart is, in this respect, an exception to all other muscles; since there are no other muscles in the body, not even those which resemble the heart in the circumstance of being excited to action by their contents, which are, or have even been imagined to be, excited by the stimulant quality of arterial blood. The supply of arterial blood is necessary to the structure, and consequently to the action, of every muscle in the body; and yet we are called upon to imagine that arterial blood contributes to the action of different muscles in another and a different manner. The heart must also be regarded, not only as an exception to other muscles, but almost to itself; since the right side of the heart corresponds with other muscles in being an exception to the proposition that the contraction of muscular fibre is referable to the stimulant quality of arterial blood. But we may go still far-

ther: there are many examples which prove that the stimulant quality of arterial blood is not, under all circumstances, necessary to the contraction even of the left side of the heart. "In the foetus, both sides of the heart act from the stimulus of black blood." "The use of the sides of the heart is, in one respect, the reverse in the foetus of what it is after birth. In the foetus, the right side receives the purest blood, whilst the left receives it after birth." "In death from suffocation, the heart continues to pulsate for several minutes after the breathing has entirely ceased; in consequence of which, the blood which passes through the pulmonary vessels no longer receives the influence of oxygen, and therefore black blood circulates." Now it cannot be maintained that a physiological explanation, founded upon an assumed peculiarity, is for a moment entitled to our consideration, if the same phenomenon can be equally well explained upon the presumption, we might say the justifiable inference, that no peculiarity exists. There are, it may be said, many other examples of muscles being excited to action by their appropriate stimuli; and therefore it involves no peculiarity, but is consistent with the laws of life, to suppose that the right and the left sides of the heart are obedient to different stimuli. Now the fact, if admitted, and we believe it to be questionable, is far from being applicable to the case in point; because the examples alluded to are not examples of muscular contraction occurring in obedience, and in obedience only, to the agency of a peculiar stimulus, when the ordinary stimulus of muscular contraction is both present and inactive. If the left side of the heart be uninfluenced by the stimulus of distention arising from the accumulation of florid blood in its cavities, the left side of the heart is an exception to other muscles, not only in requiring a peculiar stimulus, but in being uninfluenced by that which is a common cause of muscular contraction. If, on the contrary, the left side of the heart be stimulated by the distention of its cavities, there is no occasion for, and therefore no right to presume, the operation of any other stimulus. Had the physiologist proved that the left side of the heart, possessing its full power of contraction, would not contract in obedience to the stimulus of

distention, he would have been justified in attributing its contraction to another cause, but the operation of such cause cannot be legitimately inferred, until the inefficiency of the common cause of muscular contraction has been demonstrated. We are of opinion, therefore, that the contraction of the left side of the heart has been attributed to the stimulant quality of arterial blood erroneously, and that the difficulties which such an opinion involves, add considerable weight to any explanation which may not be liable to similar or equally formidable objections.

According to our views of the subject, a supply of oxygen is essential to the continuance of every living action, because essential to that perfection of structure upon which the susceptibility of action—that is to say, the faculty of being excited into action by the agency of an appropriate stimulus—is dependent. The whole of the oxygen expended in respiration, is, in our opinion, absorbed, united with the blood, and, at the moment of its union, converted into an animal principle; which principle becomes, when assimilated with the structure of the body by the process of nutrition, a necessary but concurrent cause of that living property which enables every organ to act in obedience to its natural stimulus.

[To be continued.]

EXTRACTS FROM JOURNALS, *Foreign and Domestic.*

USE OF TURPENTINE IN IRITIS.

TURPENTINE has lately been recommended by Mr. Hugh Carmichael, of Dublin, in syphilitic iritis, and other deep-seated inflammations of the eye. The cases which he has related in his interesting pamphlet, afford indubitable evidence that this medicine has occasionally removed that species of iritis which is considered as syphilitic; and even after lymph has been effused into the pupil, and condylomata risen on the surface of the iris, has restored these parts to their perfectly healthy state. It was from the acknowledged influence of turpentine in peritonitis, and the analogy in point of morbid effects between inflammation of the peri-

toneum and that of the iris, in both cases a serous membrane being engaged, and in both, adhesions being produced between surfaces intended to be free, that Mr. C. was led to make use of turpentine in iritis. The results were such as to confirm the idea he had formed. As it is in syphilitic cases chiefly that he has found turpentine useful, he is well aware of the objection likely to be started by some, that this medicine has never been known to possess any anti-syphilitic virtues. To this he might have effectively replied, by an appeal to the non-mercurial treatment of syphilis, and to the overpowering testimony of the facts which he himself has recorded. He seems at first disposed, however, rather to chime in with the scepticism of Mr. Travers, who is at a loss to determine whether what is generally considered as syphilitic iritis, is actually a venereal inflammation, or a symptom which merely resembles syphilis, or a disease engrafted on the syphilitic, or an effect produced by the poison of mercury. But in a more advanced part of his inquiry, Mr. C. declares in favour of the doctrine, that mercury operates in the favourable manner in which it is universally acknowledged to do in syphilitic iritis, not so much by means of any peculiar anti-syphilitic property which it possesses, as in consequence of its power to excite the action of the absorbents; and this same sorbefacient power he claims for the oil of turpentine. This claim is abundantly vindicated by the cases which Mr. C. has related; and not only so, but he has also demonstrated that this medicine possesses a controlling power over the inflammatory process, upon which the effusion of lymph, in syphilitic iritis, depends.

Although Mr. Carmichael has the merit of having brought forward a new medicine in syphilitic iritis, of unquestionable utility, he is by no means blind to the virtues of other remedies. He acknowledges that the same antiphlogistic and sorbefacient effects which he has derived from turpentine, may be produced in a more decided manner by mercury; while he very properly urges, that the rapidity with which turpentine pervades the body, and consequently brings disease under its influence, together with the absence of fever attending its operation on the constitution, must render its use a matter of interest and

utility, though the same effects might be accomplished by other means, and even in a more decided manner. Cases of syphilitic iritis occasionally occur where, from a variety of circumstances, the administration of mercury is, for the time, altogether inadmissible, or at least, extremely hazardous. How fortunate then will it be, if an efficient substitute for mercury be found in the medicine proposed by Mr. Carmichael!

The dose of oil of turpentine is a drachm thrice a-day. Its disagreeable flavour and nauseating effects may be obviated by giving it in the form of an emulsion. If it induces strangury, linseed tea and camphor julep may be administered, or its use suspended for a time. The tendency to heartburn, which it sometimes causes, may be prevented by an addition of ten or fifteen grains of carbonate of soda to the eight-ounce emulsion, containing an ounce of turpentine.

When the local inflammation is high, and acute pain is present in the eye and side of the head, abstraction of blood ought by no means to be neglected, notwithstanding the statement of Mr. C. that he has frequently, even when these symptoms were urgent, relied solely on the turpentine mixture, and reaped from it the most decided and expeditious relief. The condition of the bowels will also require attention; the beneficial effects of the turpentine appearing to be suspended when constipation is present, and again called forth when this is removed. Perfect rest, too, if not absolutely necessary, will be found highly conducive to the complete production of the salutary effects of the turpentine. Mr. C. states, that in a few patients, who, from their particular situations in life, were obliged to continue in active employment, the same satisfactory results did not follow its exhibition, nor was its influence fully established until this was attended to.

In some of the cases given by Mr. C. sedatives were employed along with turpentine; such as opium, henbane, and cicuta. These may be exhibited both internally and externally; and of course, the application of belladonna ought not to be omitted.

Mr. C. states, that the administration of turpentine has very seldom failed in effecting a perfect cure of syphilitic iritis, and that an amendment has generally been quite perceptible the day after

it was commenced. The average period of cure seems in his hands to have been about eleven days.—*Glasgow Medical Journal*.

ILEUS CURED BY MEANS OF CRUDE MERCURY.

A lady, aged 44, had been for some years subject to attacks of colic, for which she generally had recourse to spirits. On the 19th of Sept. she was seized with colic, accompanied by constipation: the pains increased, and were exceedingly severe on the 21st, when Dr. Ebers was sent for. The patient had then violent pain, which came on in paroxysms, and was chiefly seated in the vicinity of the umbilicus, and in the right iliac region. The pain was not increased by pressure, and there was little fever. There was constant vomiting, but no trace of hernia. She was bled generally and locally, and laxatives with antispasmodics were administered, while fomentations, embrocations, and enemata, were also had recourse to. None of these, however, brought relief, and next day there was stercoraceous vomiting. Ten drops of laudanum and croton oil were given, the external applications being continued. Still no relief. On the morning of the 23d an ounce and a half of quicksilver was administered, with ten drops of laudanum; at the same time some castor oil was given in the form of emulsion, and oleagenous clysters were injected. At noon no stool having been procured, two ounces more of the quicksilver were taken. At two o'clock some inflammatory symptoms having come on, she was bled. At five, no change. A little feculent matter had come away with the enemata, and some gurgling was heard in the bowels. Some aloes and hyoscyamus were given in solution. At ten o'clock, no change: three ounces of quicksilver with ten drops of laudanum were then administered, the mixture above mentioned being continued. On the 24th, at four in the morning, copious evacuations took place, with immediate relief. Up to the 27th the dejections contained indurated feculent masses, and it was not till these gave place to a diarrhoea that quicksilver was seen in the stools.—*Hufeland's Journal*.

HERNIA HUMORALIS.

Many patients affected with inflamma-

tory swelling of the testicles after gonorrhœa, have lately been admitted at the Hotel Dieu. The history of the cases individually are of little interest, on which account we abstain from giving them; and only advert to the subject to notice the remarks made by M. Dupuytren as to his general treatment of such affections. He directs from 20 to 40 leeches to be applied on the scrotum, as nearly as possible on the part corresponding to the testicle; and this application is repeated two or three times, if necessary. Fomentations, poultices, low diet, and diluent drinks, with confinement to bed and the maintenance of the testicles in the support of a suspensory, are rigorously adopted. M. Dupuytren never, on any occasion, practises the method recommended by some, of introducing a bougie into the urethra, by way of irritant, and suffering it to remain there;—a sound or bougie so used, seldom restores the discharge, while it often augments the irritation of the testicles, sometimes even causing formidable mischief. Thus he has seen cases in which individuals have died of other diseases during the time they were under treatment for swelled testicle, by means of bougies left in the urethra: in them the vasa deferentia and vesiculæ seminales were filled with pus.

The result of M. Dupuytren's practice has been very successful, seldom requiring more than a few days for its completion; whereas the other method often lasted six weeks or two months.—*Journal Hebdomadaire*.

PATHOLOGICAL EXAMINATION OF THE SPINAL CORD.

Probably the spinal cord would be much more frequently examined if this object were more easily accomplished; but every one who has practised it must be aware that it is tedious, and even laborious. M. Yarral, a French surgeon, has lately invented a kind of double saw, for the express purpose of removing the posterior part of the vertebral column; and as the instrument is favourably spoken of, we think it would be worth while to have one in our dissecting-rooms and hospitals. It is called *rachitome double*, and is to be had of M. Charriere, surgical instrument maker, Paris.

ROYAL INSTITUTION,

Friday, March 12,

GEORGE MOORE, ESQ. VICE-PRESIDENT,
IN THE CHAIR.

*On the Composition of Urinary Calculi,
and more especially on the Discoveries
made by the late Dr. Wollaston in that
branch of chemical science.*

PROFESSOR BRANDE—who is now engaged in delivering an elaborate and most interesting course of lectures "On the History of the Chemical Discoveries made in the Laboratory of the Royal Institution by the late Sir Humphry Davy," discoveries which have effected a complete revolution in the science, and form one of its most brilliant eras; discoveries which have deservedly gained such high honour, not only for the philosopher by whose labours, but also for the society under whose auspices they were more immediately made—gave this evening a discourse "On the Composition of Urinary Calculi, and more especially on the Discoveries made by the late Dr. Wollaston in that branch of chemical science." This, a task of no little difficulty, considering that it is a topic of professional rather than of popular philosophy, he performed with his usual elegance and perspicuity, throwing an air of general interest over a subject that in other hands might have sunk into an abstruse medical dissertation.

Familiarized as physicians and surgeons now are with the various symptoms accompanying the several urinary formations, and assisted as they find themselves in the treatment of these complaints by the certainty with which they can predict the composition of the different deposits, they seldom reflect for how short a time such knowledge has been theirs, and still less frequently do they consider for how much on this subject they are indebted to the laborious investigations of one philosopher. It is, therefore, a grateful duty thus to acknowledge our obligations—more especially at a time when continental writers would claim as original, discoveries which Wollaston had published in the Philosophical Transactions several years before.

When Wollaston commenced his researches, the composition of only one calculus, the lithic, or as it is now

called, uric acid, was known, and how unsatisfactory, how unsuccessful, must have been the treatment of urinary complaints amidst the uncertainty in which the constitution of the others was involved. To him, therefore, although he has enlisted many able successors in these investigations, are we principally indebted for the powers which we now possess of relieving or curing diseases which baffled the resources of the previous age.

We do not propose following the lecturer throughout the historical detail, as the chief facts have been published in the Philosophical Transactions for 1797 and 1810; indeed, most of them must be perfectly well known to the members of our profession. We must not, however, omit mentioning that the cystic oxide has been found by Mr. Brande to be more frequent in its occurrence than has been supposed; and that the presence of silica, the existence of which in urine, other than as adventitious matter, has hitherto been deemed apocryphal, has lately been detected in an unquestionable form.

On the table were many very splendid and interesting specimens of urinary calculi of all the different kinds; and in the library we saw some beautiful and highly-finished drawings by Mr. Perry, the anatomical draftsman, who was employed to make the sketches for Dr. Seymour's valuable work on Ovarian Diseases.

ANATOMY.

[The following petition was recently laid on the table at the Westminster Medical Society, for the signature of members. We insert it as a model which we think may assist others in framing petitions for a like purpose.]

To the Honorable the Commons, &c.

THE humble Petition of the undersigned Physicians, Surgeons, and Students of Medicine, Members of the Westminster Medical Society,

Sheweth,

That your petitioners, in again approaching your honorable House, and while they beg leave respectfully to express their thanks for the great attention which their claims for relief have

already received, cannot refrain from stating their deep regret that any delay should have taken place in carrying into effect the measures proposed for relieving them from the disabilities and disadvantages under which they now labor.

That your petitioners still continue to encounter the greatest difficulty in attaining that knowledge of anatomy which the welfare of the community requires them, as members of the medical profession, to possess.

That your petitioners cannot contemplate, without the greatest alarm, the consequences which must inevitably follow, if the existing laws, affecting the persons employed in obtaining and dissecting bodies, be allowed to continue without modification.

That it will be impossible for your petitioners, especially those entering upon their professional studies, to discharge, either with safety to the public or satisfaction to themselves, the important duties committed to their charge, unless further facilities be afforded for the prosecution of the science of anatomy, the basis of all medical and surgical knowledge.

Your petitioners therefore most humbly pray, that it may please your honourable House to pass such enactments to relieve your petitioners from the disadvantages and disabilities under which they now labour, and to afford them farther facilities for the prosecution of the science of anatomy, as to your honourable House may seem expedient.

And your petitioners shall ever pray, &c.

HANDEY v. HENSON.

A CORRESPONDENT, who signs himself "one of the original Committee," in reply to our observations, (see Gazette, p. 731), informs us that the papers sent to the different medical booksellers were for the purpose of collecting subscriptions to publish Lord Tenterden's decision in this cause by advertisements, not to obtain the signatures of those who approved of the dinner. Our correspondent denies that Wakley has endeavoured to identify himself with the plan of getting up a public dinner; but on this point we must be allowed to judge for ourselves. We regard the dinner as an injudicious scheme, and think that most probably it will not really take place, as the great body of the general practitioners are against the measure, from a conviction that its tendency would be injurious to their interests.

MEDICAL GAZETTE.

Saturday, March 27, 1830.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."—CICERO.

MR. LAWRENCE'S LECTURES—COMPLETE IN TWO VOLUMES.

IN compliance with the wishes of many of our readers, we have resolved to complete the publication of Mr. Lawrence's extended and valuable course of lectures before next October, so that it may be comprised within two volumes. The editor of the *Lancet*, to whom the publication of these lectures in the *Gazette*, and the peculiar circumstances under which this took place, have naturally been the source of great mortification, lately endeavoured to gain some advantage over us by raising the price of his journal, and inserting three lectures in each number. Instead of doing this, we shall occasionally insert two lectures, and make up what is necessary for the completion of our purpose by a few extra numbers. We shall thus bring the course to a close at the same time as our opponent, while, in consequence of the plan which he has adopted, we shall be enabled to use his version of the lectures to render our own as perfect as possible. Our readers will thus have the advantage of a greatly superior edition of the lectures from the combined reports of two short-hand writers—a circumstance of great importance, as it will frequently happen that one is able to catch what escapes the other; in proof of which, we need only refer to the specimens which we gave in a former number—all taken from one lecture. Our amiable contemporary will doubtless derive gratification from thus, unintentionally, contributing to the value of a publication, on the rise and progress of which he has looked with such an anxious and friendly interest.

THE CLINICAL COMPANION.

[We have lately given some very interesting reports from the London Hospital, and our attention has been attracted to the following Table, prepared by Dr. Macbraire, for the use of the pupils. We insert it as calculated to assist others in reporting cases.]

NAME, 'AGE, EMPLOYMENT, COUNTRY, AND DISTRICT.	
TEMPERAMENT	{ Nervous. Lymphatic. Sanguineous. Temperate.
HABITS OF LIVING.....	{ Intemperate. Sedentary, &c.
TO WHAT DISEASES BEEN SUBJECT.....	{ Affections of the different periods of life. Hereditary diseases.
GENERAL APPEARANCE OF THE BODY	{ Emaciated. Bloated. Sallow. Marked with scars, spots, &c. Position. Menacing.
EXPRESSION OF COUNTENANCE	{ Anxious. Indicating pain. Expressing stupidity, &c.
WHEN AND HOW THE PRESENT ILLNESS CAME ON, AND TO WHAT IT MAY BE ATTRIBUTED.	{ Remote and Proximate causes.
PULSE, { { at birth from130 to 140... { at 3 Years from..... 90 to 100 .. { at 14 Years from .. 80 to 85... { at Adult age from... 75 to 80 . { at Old age from ... 75 to 60...	{ Synchronous with the action of the left ventricle : difference at the wrists : quick, slow, strong, weak, hard, soft, full, small, regular, irregular, intermitting, &c.
TONGUE	{ White, red, dry, moist, clean, coated, tender, aphous ; state of the mouth.
BOWELS	{ Constipated, loose ; evacuations, colour of, extremely fetid, mucous, bloody, mixed with pus, shreds of membrane, worms ; attended with tormina, tenesmus.
SKIN.....temperature of95 Fahr.	{ Dry, moist, hot, cold, &c.
RESPIRATION :. 19 in a minute	{ Stertorous, elevated, slow, abdominal, &c.
SLEEP	{ Disturbed, refreshing, watchfulness, drowsiness, somnolence.
APPETITE	{ Good, indifferent, voracious, &c.
THIRST	
URINE.....	{ Scanty, copious, clear, turbid, bloody, purulent, diabetic, depositing mucus, gravel, &c.
MENSES	{ Suppressed, scanty, profuse, colour of, consistence attended with pain, &c.
TREATMENT BEFORE ADMISSION..	
PRESENT THERAPEUTIC AND DIATETIC TREATMENT, WITH THEIR EFFECTS NOTED DAILY...	
TERMINATIONS	{ Suddenly, by metastasis, followed by another disease, &c.

The affection of each organ, or each class of organs, will demand a more particular examination—thus if an affection of the sensorium and nervous system be suspected, the attention must be directed to the intellectual faculties and to the system of locomotion and sensation.

If the circulating system—examine the actions of the heart	{	Rhythm.	{	Bruit de Soufflet.		
		Extent of Pulsation.		Bruit de Râpe.		
		Impulsion.		Frémissement Cataire.		
		Sound of the contraction.		Craquement de Cuir.		
If the respiratory system—examine the larynx, the states of the respi- ration and voice	{	auscultation of the respiration.	{	Rhonchus sonorus gravis	Cough	
				— Sibilans	Metallic tingling	
				— Mucosus	Expectoration	
				— Crepitans	Percussion	
	{	auscultation of the voice.		Pectoriloquy.	{	Measurement of the Chest
				Bronchophony.		Succession.
				Ægophony.		

If the digestive system—examine the state of the fauces of the abdomen by pressure, percussion, &c. note the appearance of the tongue, evacuations, &c. If the urinary organs—examine the bladder, the sensations in the loins and thighs, and the state of the urine, &c. the organs of generation in the female.

HOSPITAL REPORTS.

LONDON HOSPITAL.

Pericarditis after Rheumatism.

THOMAS GOODACRE, æt. 18, a labourer of a slight form, was admitted into the hospital on the 25th of Feb. under the care of Dr. Billing.

He reports that about three weeks ago he was attacked with pains in his limbs, from working in a damp cellar, which were relieved by using a liniment, although his general health did not improve. His countenance at present indicates great anxiety, and much suffering; he complains of pain in the precordial region, which is increased by pressure; of pains in his arms, and swelling of the wrists; and of difficulty of breathing. Pulse 120, full, and throbbing; respiration about 70; cough slight, and unattended by expectoration, but producing much pain at the region of the heart; the action of the heart noisy, and with considerable impulse; decubitus always on the back; ronchus sonorus gravis on the right side; no appetite; tongue furred, and red at the point; bowels confined; skin hot, and perspiring occasionally; no sleep. He lost 16 ounces of blood from the arm on the 24th inst. when the present severe symptoms first came on; and he was bled twice on the morning of the 25th, previous to his admission.

Mist. Cath. Ant. ter die.
Milk diet.

26th.—Symptoms the same as yesterday; apprehension of death; was delirious in the night. Bowels open to-day from the medicine.

Hydrarg. Submur. gr. v.
Pulv. Digit. gr. j. ter die.
Hirudines xx. reg. cordis statim.
Omit. Mistura.

27th.—Was delirious during the night; he feels much easier this morning. Countenance less anxious; less pain in the chest; pulse 120, and throbbing; tongue white, thirst; bowels free; skin perspiring copiously.

Hirudines viij. pectori et postea applic.
Cataplasma.
Liq. Opii Sedat. ℥xv. h. s. et repet. si opus fuerit.
Cont. Pil.

March 1.—He slept after the second dose of the liquor opii sedat. and feels now better than he did on the day of the last report. Cough is very troublesome, and countenance still anxious; is delirious at night; the gums are not yet affected; was under the necessity of having his urine drawn off by the

catheter (a blister had been applied between the shoulders on the 28th ult. on account of the dyspnoea); pulse 120; respiration 60; tongue white; no appetite; much thirst; bowels open.

Perstet.

2d.—Is free from pain, but complains of feeling weak and confused in his head; has not slept since the night he took the opiate; says that his teeth feel loose, but the gums are not sore; cannot recollect if his bowels have been open, but the nurse states that they were relieved twice this morning; pulse 120, full, and throbbing; respiration attended by a wheezing noise; tongue white, great thirst.

Omit. Hydrarg. Submur. et Pulv. Digit.
Habeat. Liquor. Hydrarg. Oxymur. 3j.
Ol. Terebinth ℥iij. Tinct. Opii ℥x.
quartis horis.
Educantur sang. 3vj. vel 3viij. et postea
applicentur. Hirud. viij. reg. cordis.

3d.—The blood drawn yesterday is cupped, and presents the buffy coat; he feels free from pain, but is very drowsy; pulse still full and throbbing; respiration more hurried and wheezing; restlessness; face livid and perspiring. He died in the afternoon, the pulse preserving the same character to the last.

Post-mortem examination on the 4th.—Thorax: on opening the chest, about half a pint of serum escaped from each side; the lungs were perfectly sound.

The pericardium was observed to occupy a larger space than usual, and on puncturing it, a few drachms of limpid serum were effused. On making an incision through the pericardium, it was found to be much thickened, of a dark red colour, and to be universally adherent to the surface of the heart, by bands of coagulable lymph. The exudation both on the surface of the heart and of the sac was of considerable thickness, irregularly disposed, presenting numerous transverse wrinkles, and here and there a florid red colour. The left ventricle was paler than natural, and slightly hypertrophied. The aorta was smaller than natural, and its internal surface of a bright red colour. The heart, taken as a whole, was enlarged.

The friends of the deceased objected to any farther examination of the body.

John White, æt. 13, a sailor, was admitted into the hospital on the 25th of Feb. under the care of Dr. Billing.

He states that in November last, whilst off the coast of Scotland, he suffered much in his feet from the severity of the weather, and afterwards from pain in the region of the heart, attended by a slight dry cough, great difficulty of breathing, and loss of appetite. He has been at home for the last ten weeks, and has had medical attendance, but without deriving much benefit.

At present his countenance is turgid, and the lips livid; the respiration is hurried, and attended by sighing at intervals; the respiratory murmur is natural; there is considerable impulsion from the action of the left side of the heart, with a strong bruit de soufflet; pulse quick and weak; tongue white; bowels confined; not much sleep.

Haust. Cath. alt. auroris.
Milk diet.

26th.—Feels as before; bruit de soufflet very distinct, and a vibratory sensation is conveyed to the hand when placed over the region of the heart. There is no cough when he remains quiet. Pulse 108, and weak; tongue furred; bowels relieved three times to-day.

Tinct. Digit. ℥x. ex Infus. Gent. Comp. ter die.

Hirudines x. reg. cordis quotidie.
Infric. cruribus Ungt. Hydrarg. fort. nocte manequae.

27th.—Feels rather better to-day; the colour of the lips is more natural; there is less of the vibratory sensation; pulse 108; appetite better.

Perstet.

[To be continued.]

Henry Lester, æt. 23, a sailor, was admitted into this hospital on the 1st of March, under the care of Dr. Billing. He states that on the evening of the 27th February he was seized with pain in the chest, particularly at the precordial region, accompanied with great fever, and that on the morning of the 28th, feeling himself better, he walked about, but the pain coming on suddenly, and with great severity, he fell down in the street. He was taken to the nearest house and bled, and was sent to the hospital in the evening. He was again bled, and ordered to take the mist. ant. tart. every hour.

He now complains of great pain in the left side of the chest, which extends towards the back, and which is very much aggravated on coughing or making a deep inspiration. The severity of the pain causes him to moan incessantly. The dyspnoea is very great; the cough is short, and without expectoration; respiratory murmur natural over both sides of the chest; pulse 110, and hard; skin moist; tongue white; much thirst; no appetite; bowels open yesterday evening from medicine, but not to-day. In the absence of Dr. Billing he was seen by Dr. Gordon, who ordered,

Educat. Sanguis ad deliquium Hydrarg.
Submur. gr. iij.
Pulv. Opii, gr. ss. 2a. quaque hora.
Linctus pro tussi.

2d.—Was bled yesterday to 3xx. with

only temporary benefit. Eighteen leeches have been applied to the precordial region to-day, without any relief. Is still constantly moaning from pain, which is much increased by a short troublesome cough. Had no sleep during the night; pulse 110; skin hot, and perspiring here and there; tongue white; one motion to-day; anxiety.

Tinct. Hyoscyam.

Tinct. Digit. aa. 3j. statim.

Hirud. xii. lateri sinistro statim et postea cataplasma.

Liq. Hydrarg. Oxymer. 3j.

Liq. Opii Sedativi, ℥x. alternis horis.

3d.—Feels much better to-day; says that he fell asleep very soon after the first draught yesterday, and that he slept well during the night; is drowsy from the medicine which he is now taking. Pulse 90, and soft; respiration easier; no moaning; less cough; tongue white; bowels open; countenance more tranquil.

Perstet.

5th.—Feels better; still some pain on coughing, or on making a deep inspiration. Pulse 84, full, and rather jerking; tongue furred; mouth not yet sore; one motion daily.

Cal. c. Jalap. ʒj. statim et repet. alt. auroris.

Hirudines, xii. lateri sinistro c. fotu assiduo et postea catap.

EDINBURGH ROYAL INFIRMARY.

Diseases of the external parts of the Head.

Carbuncle on the Forehead.

WILLIAM GORDON, æt. 48, admitted under the care of Mr. Liston, October 1st. states that about six weeks ago the integuments of the forehead became tense, painful, and slightly swollen, forming a small tumor, which slowly increased in size. About a fortnight previous to admission leeches were applied, and an opening was made with a lancet into the apex of the tumor. It has since enlarged rapidly, and is now of the size of a large orange, of firm consistence, and resting on a hardened base. It is of a red colour, and sloughy appearance towards the centre, and discharges a thin serous fluid. In short, it presents all the usual characters of carbuncle. He complains of lancinating pain in the part, takes little or no food, and his health is much impaired.

2d.—A crucial incision was made through the substance of the tumor, exposing extensive sloughing of the cellular tissue. Poul-tices were applied, and nourishing diet, with ʒviii. of wine, ordered.

3d.—R Sulph. Quininae, gr. ij.

Pulv. Aromatic. gr. iij. ℥.

Fiat. Pulv. et tal. sum. un. ter indies.

4th.—Potassa fusa has been freely applied to the sores, with the view of destroying the unhealthy cellular substance and stimulating the adjacent parts.

15th.—The sloughs have separated, and the sore is granulating, and of a healthy appearance; the patient has regained his appetite and strength.

His digestive organs were kept in good order; he recovered his health rapidly, and was soon dismissed cured.

Malignant Diseases of Cranium.

William Broadfoot, æt. 52, admitted under the care of Mr. Liston, Sept. 30th. There is an ulcer, of a malignant aspect, about three inches long and two broad, situate over the os frontis, immediately above the left eye, with dark lividity of the surrounding integuments, which are tense and somewhat elevated. Its edges are thickened and much everted; the granulations are of an unhealthy aspect, and the discharge is thin and acrid. The sore commenced five years ago in consequence of the ulceration of a small hard tumor, which had been in an indolent state during the previous eighteen months. The os frontis is partially denuded, and feels rough on examination with a probe. The left eye protrudes, and is much disorganized, but is still obedient to the action of its muscles. Over the right parietal bone there is a tumor of considerable size, soft and œdematous.

Eighteen months ago he was suddenly seized, when in bed, with loss of sensation and voluntary motion; from this state he gradually recovered, but never regained the power of raising his head. Had a syphilitic affection when twenty-three years of age, for which he took a great quantity of mercury.

There is considerable projection of the lower cervical and upper dorsal vertebræ; the neck is much shortened; the chin rests on the upper part of the sternum, and he complains of great pain in the shoulder and elbow joints. He cannot move his fingers freely, is unable to raise himself in bed, and his health is greatly impaired. He takes little food, and is much enfeebled and emaciated.

Poultices were applied to the sore, and endeavours made to support his strength by nourishing food; his bowels were kept regular, and anodyne draughts exhibited.

Oct. 21st.—Vision in the left eye is gone, and the organ is more protruded. Bowels constipated; no appetite; much thirst; pulse rapid and weak; profuse perspiration.

23d.—He is unable to open his mouth, so that scarcely any food can be introduced. The eye has collapsed.

He sunk gradually, and died on the 26th.

The tumor contiguous to the ulcer contained medullary matter, broken down and mixed with pus. The os frontis, excepting

a small portion of its right margin, was completely destroyed. The greater part of the left parietal bone, the anterior portion of the left temporal, and the whole of the left orbital process of the frontal bone, were also entirely destroyed. Their situation was occupied by numerous small, irregular fragments of cancellated bone, which appeared to possess but little vitality, and were imbedded amongst a greyish-coloured substance of almost fluid consistence; they partially adhered to the dura mater, which was slightly thickened, and of a spongy texture on its serous surface. The margins of the deficiency in the cranium were extremely irregular and serrated, much loosened in texture, and apparently approaching towards a state of necrosis. In consequence of the deficiency in the left orbit at its upper part, and its communication with the cranial ulcer, its cavity was partially occupied by pus, and by the grey pultaceous mass in which the dead portions of bone were imbedded; the eyeball was thereby protruded, and was found to be completely disorganized. The zygomatic arch was partially destroyed, and portions of the œthmoid bone were also diseased. The superior surface of the brain was considerably softened, apparently from putrefaction. The bodies of the fourth and fifth cervical vertebræ were extensively absorbed, but minute examination of the spine was unavoidably omitted.

Injuries of the Brain.

Concussion—Application of the Trephine—Recovery.

John Ross, æt. 36, admitted under the care of Mr. Liston, Nov. 15th. On left side of forehead there is a crucial wound of the integuments, and a circular aperture in the skull, exposing the dura mater of its healthy appearance. The patient is insensible; pupils obedient to the stimulus of light; pulse 86, and of moderate strength; urine passed involuntarily; slight convulsive actions of the arms.

He is reported to have been discovered, about 1 A.M. lying in a state of insensibility, near the bottom of a stair in Leith. He was carried to a dispensary, and was bled freely from the arm. Afterwards the stomach was emptied of its contents by means of Read's syringe. No benefit having followed this mode of procedure, the trephine was applied, but for what reason, or for what purpose, has not yet been ascertained. He was admitted into the infirmary at 10 A.M. The trephined portion of skull was carefully examined by Mr. Liston, but no depression or fracture could be perceived. A compress, supported by a roller, was applied.

Nov. 16th.—The symptoms of concussion have abated, the patient being capable of answering questions, though rather incohe-

rently. Pulse 60, and full. His bowels have been freely opened by a purgative enema, and cold cloths are constantly applied to the head.

26th.—He is considerably better; the wound is granulating, and of a healthy appearance; appetite good; bowels constipated.

Habeat Mist. Cathart. \mathfrak{z} ijj.

Dec. 2d.—He talks much, but seems to be naturally loquacious. Pulse natural; bowels slow; appetite rather voracious. He ultimately recovered, but continued to manifest a slight degree of imbecility, which, however, appeared to be congenital.

Concussion—Recovery.

Michael Morgan, æt. 35, admitted under the care of Mr. Liston, Dec. 9th, was brought into the infirmary, at 4 p.m. in a state of insensibility, with weak irregular pulse, and cold extremities. There was a small contused wound on the posterior part of the scalp. It was stated that he had fallen from a considerable height while intoxicated about twenty-four hours previous to admission. His head was shaved, and cold cloths applied.

10th.—Is insensible; cannot be roused to answer questions, and occasionally mutters. Pulse weak. Ordered an enema of assafoetida with turpentine, and a cathartic draught.

12th.—The cathartic operates freely; the stupor is considerably diminished, and he answers questions when roused. Pulse 80, and moderate; skin cool.

17th.—The stupor still continues, and he passes his urine involuntarily. Pulse 90, and full; pupils contracted.

Fiat V. S. ad \mathfrak{z} x.

24th.—An incision was made into the swollen scalp, and a considerable quantity of blood allowed to flow.

25th.—The swelling of the scalp, and the other untoward symptoms, are much diminished. The disposition to drowsiness slowly abated, and the wound cicatrized. On the 2d of January he was able to be out of bed, and on the 19th he was dismissed cured.

Injury of the Head—Stupor—Recovery.

John Kay, æt. 40, admitted under the care of Mr. Liston, Dec. 21st., was brought into the infirmary, about 11 p.m. in a state of insensibility. There was no wound of the scalp; his pupils were natural; his pulse 84, firm and regular; his extremities were cold, and his urine and fæces were passed involuntarily; breathing was stertorous, and there was slight bleeding from the left ear. Is reported to have fallen from a stair while in a state of intoxication. He had been co-

piously bled before admission. About \mathfrak{z} x. of blood were abstracted from the arm, and cold cloths applied to the head.

23d.—He still lies in a state of stupor, with slightly stertorous breathing. Pulse 50, and full; urine passed involuntarily.

From this date he continued in a state of complete stupor till the 27th, when he appeared less drowsy, but talked much and incoherently. The stupor again returned; he passed his urine and fæces involuntarily, and sometimes talked incoherently, especially during the night. His bowels were obstinately constipated, and were kept open only by the most drastic purgatives. His extremities became cold, and his pulse very indistinct. Ardent spirits were then administered in small quantities for two or three days with marked advantage.

On the 20th of January he still talked incoherently, but answered questions when roused; pulse 96, and of moderate strength.

He afterwards improved gradually; is now out of bed, and seems in good health, but his intellectual faculties are considerably impaired.

MANCHESTER INFIRMARY.

We select the following from numerous Cases, as giving a fair view of the use of

Strychnia in Paralysis.

CASE I.—Mary Mitchell, aged 30 years, admitted 28th of March, 1824.

She has entirely lost the power of the left side, with diminished sensibility. Complains also of occasional severe headach, and is liable at times to sudden attacks of vertigo. Her articulation is much impaired. Urine and fæces passed involuntarily in bed. Corner of the mouth much drawn to the right side; pulse 86, rather feeble. Countenance pallid. Sleeps ill. The attack occurred about three months ago, shortly after being delivered of twins, and has gradually increased. She attributes her complaint to over-fatigue and cold, when far advanced in pregnancy. Has used several remedies, but is ignorant of their nature.

Ordered five leeches behind each ear, a blister to the nape of the neck, and a dose of the common purging mixture of the house.

April 1st.—Leeches bled freely, and blister discharged well, with relief to pain in the head. Several copious stools obtained from purgative. To commence with the twelfth of a grain of strychnia, in the form of a pill, twice a day.

4th.—Symptoms unchanged. Strychnia pill to be taken three times in the day.

7th.—Head remains free from uneasiness. No perceptible effect from alkali.

10th.—The dose of strychnia to be increased to the eighth part of a grain, three times a day. Bowels regular.

14th. The alkali has not as yet occasioned any manifest effect upon the system. The fourth of a grain to be exhibited three times in the day.

20th.—Has again complained of slight pain in the head, but without vertigo. She states that she experienced yesterday a slight sense of prickling in the paralytic members, which continued for some time after each dose of the pills. No medicine required for bowels. Leeches to be repeated.

24th.—Pain in the head very trifling since repetition of leeches. To continue.

27th.—She appears to possess much more feeling in the affected side, as well as increased power over the paralysed muscles. Makes no complaint of pain in the head this morning. Half a grain of strychnia to be taken twice in the day.

30th.—On the second day after the exhibition of the alkali in this proportion, the patient experienced smart convulsive twitchings of the muscles of the diseased side. They are now present.

May 3d.—She can move the paralytic limbs much better, and begins to feel conscious when the bladder and rectum are evacuated. To take one grain of strychnia twice a day.

6th.—Head became affected with stupor and vertigo, and rigid contractions of the muscles of both sides of the body supervened to the employment of the third dose of the alkali in the proportion noticed in the report of the 3d. This quantity, however, was repeated yesterday and also this morning, and has been unattended by the former severe effects of the medicine. The patient has regained a considerable degree of power over the leg and arm, and the tone of the sphincters of the bladder and rectum is much restored. Not deeming it prudent to increase the dose of the alkali, she was directed to continue the one grain twice in the day.

14th.—This dose now occasions no inconvenience. To continue the strychnia in doses of half a grain, three times daily.

17th.—She is now much better; can hold a cup to her mouth when she wishes to drink, and also raise her left leg from the bed. She sits up during the day, and regularly asks for the bed-pan when she requires it. Speech more distinct. Pills to be continued.

20th.—Continues to improve. To persevere with the pills.

28th.—From the date of the last report up to the present period, her amendment has been rapid, for she now not only supports herself in the upright posture with the aid of crutches, but even walks with them from one bed to the other. Her strength, articulation, and general health, are much improved: appetite keen. She expressed a strong desire to leave the hospital, from a conviction that change of air would effect her restoration to perfect health. I endeavoured to persuade

her to remain as an in-patient for a short time longer, but without success. She was accordingly discharged, greatly relieved, at the first meeting of the weekly board, with a request on my part that she would inform me in case any relapse of her ailment should occur. I heard from her in about two months after her discharge from the hospital, and was glad to find that she had recovered the perfect use of the paralytic members, and could attend to the affairs of her family as well as at any former period of her life.

Remarks.—In this case the strychnia was very serviceable, and indeed the patient's recovery was fairly attributable to a persevering use of this active remedy. The twelfth of a grain of the alkali was first exhibited twice a day, and this proportion was increased at regular intervals to the extent of one grain twice a day; but it was found that the patient could only take half a grain thrice in the day, without experiencing a slight degree of inconvenience. The appetite was much improved during its exhibition.

CASE II.—John Prince, 29 years of age, spinner, admitted an in-patient, Sept. 13, 1824, was seized about six months ago with loss of power in the lower extremities, after bathing, whilst the body was much heated with exercise. He is now incapable of motion without the aid of crutches. He passes his urine and fæces involuntarily. The spine is free from pain. His strength is much reduced. Appetite bad. Pulse seventy-two and rather feeble. I directed him to take pil. hydrargyri four grains each night, with a saline aperient on the following morning, for the first ten days. On the 24th, I commenced with the strychnia, in the dose of a sixth of a grain, three times daily.

October 4th.—The alkali has not produced any effect upon him. Appetite somewhat improved. In other respects he remains in the same state as on his admission.

October 10th.—Strychnia augmented to the fourth of a grain every fourth hour.

14th.—Has experienced severe convulsive twitchings in the affected limbs. He is sensible of an increase of power in his inferior extremities, and wishes to rise and make trial of his crutches.

22d.—Is very much better: strychnia to be taken in the proportion of half a grain three times daily.

November 4th.—During this interval the alkali has been attended with great benefit. He is now capable of retaining both his urine and fæces, and of walking from one end of the ward to the other with the aid of a small stick. His appetite is good, bowels regular, and spirits cheerful. To continue the alkali.

16th.—He is entirely cured. In order to shew the pupils of the hospital what he could do, he ran from one end of the long gallery to the other. I ordered him

to be discharged at the first meeting of the weekly board. I had an opportunity of seeing this patient several times after he left the house, and was glad to find that he continued to enjoy the perfect use of his lower limbs.

CASE III.—Barnard Riley, æt. 43, admitted an in-patient November 4, 1824. He was suddenly seized with hemiplegia of the left side, without the occurrence of any premonitory symptoms. The power of voluntary motion, in the affected side, is quite gone, but its sensibility is not much impaired. His speech is almost unintelligible. His mind, however, continues clear. Strength reduced, appetite bad, bowels costive, and urine scanty. Pulse seventy-six, and of moderate strength. He complains of a dull pain in the forehead. I directed cupping at the nape of the neck to the amount of fourteen ounces, and prescribed purgative medicine.

November 10th.—Has derived great relief to pain in the head from cupping. He took more than a scruple of calomel, besides several ounces of the common senna mixture of the house, before the bowels were freely opened. The evacuations were dark and highly offensive. A blister was applied to each temple, and a pill, with two grains of calomel and three of the compound extract of colocynth, was ordered to be taken each morning, and to be followed in the course of three hours by a purgative draught.

15th.—Blisters rose well, and he now makes no complaint of forehead. The bowels have been freely unloaded. Having succeeded in removing the cerebral disturbance, and procuring a regular action of the intestinal canal, I deemed it safe to commence with the strychnia. He was accordingly directed to take the sixth of a grain of the alkali every fifth hour. The purgative pills were discontinued.

22d.—Little change in the symptoms. Dose of strychnia to be increased to the fourth of a grain every fourth hour.

29th.—Says that the affected side has been very much twitched, and that he always experiences a prickling sensation in the hands and feet shortly after taking each pill. Thinks there must be something "quick" in them. His bowels are regular without medicine, and his appetite much improved. Pulse eighty-two and soft. To take half a grain of the alkali twice daily.

December 9th.—Feels much better; indeed his improvement has been very evident during the last few days. He can raise both his arm and leg, and he articulates more distinctly.

20th.—His recovery is rapid. He walked this morning from one ward to another without either crutch or stick. His speech improves daily. To take half a grain of the alkali three times in the day.

28.—I consider him fit to be discharged. He walks well, and moves the left arm with as much freedom as the right.

January 10th.—The strychnia was continued up to this period, when the cure was rendered complete.

CASE IV.—Robert Hobson, 38 years of age, finisher, admitted an in-patient, October 6, 1827.

This is a case of paraplegia, the patient having lost the power over the inferior extremities, rectum, and bladder. He states that he first perceived, about four months ago, a weakness in his legs, rendering it necessary for him to use considerable effort to drag them along. This debility gradually increased, until at length he became altogether incapable of moving the lower limbs. He has no feeling in them. Head free from pain or giddiness. Pulse regular, appetite impaired. Being desirous of putting the individual efficacy of the strychnia to the test, I commenced with the exhibition of the alkali in the proportion of a sixth of a grain twice daily, without previously employing internal or local remedies of any kind.

October 10th.—No change. Dose to be increased to the fourth of a grain three times in the day.

20th.—He considers himself better, having obtained a slight command over the sphincters of the bladder and rectum. On the 14th he first experienced involuntary twitchings in the inferior extremities, which have been continued at intervals up to the present time. To take half a grain of the alkali twice daily.

28th.—He is in excellent spirits, owing to the benefit he has derived from the pills. He can raise the lower limbs to some height from the bed, and also retain at pleasure both his urine and feces. During the last week the twitchings have been rather severe, but not painfully so. He is very desirous of persevering with the pills. To continue.

November 7th.—Since the last report, the patient has been allowed to sit up for several hours during the day. He is surprisingly improved, being able to walk without the aid of a stick from one end of the long ward to the other. Appetite good. Bowels regular. Warmth and sensibility of inferior extremities natural. Half grain pill to be taken three times daily.

26th.—The additional half grain excited for some days powerful twitching in the legs and thighs; but in the course of a week or less they became not more severe than was occasioned by half a grain of the alkali taken twice in the day. He is now capable of walking as well as at any former period of his life, and his general health is excellent. It is impossible to describe the gratitude which this patient felt for his restoration to health. He was ordered to be discharged *cured* at the first meeting of the weekly board.

CASE V.—Margaret Royle, 17 years of age, was admitted an in-patient on the 3d of April, 1828.

This young woman had only menstruated twice, shortly after her sixteenth year; and it appears from her mother's account, that she imprudently exposed herself to cold when the menses were last present, and since that period she has never been free from ailment. She first perceived a numbness in her lower extremities about eight months ago, which was followed by a gradual inability to move them. She has now neither power nor feeling in them, or in the bladder and rectum. No pain in the head. Appetite tolerably good. Pulse seventy four, of moderate strength. No apparent disease in the skin. I directed her to take, on the following morning, the eighth of a grain of strychnia, and to continue that dose twice daily. *No other internal or external remedies to be employed.* Has taken her medicine with regularity, but has not as yet derived any benefit from it. Dose to be increased to the sixth of a grain at the same interval.

16th.—Is somewhat improved, being able to move her toes occasionally. Says that her legs have been much twitched during the last week. To continue the medicine.

26th.—The good effects of the remedy have been very evident since the last report. She can now retain both her fæces and urine, and walk from one bed to another, with the help of a small stick. Her power over the affected limbs increases daily. Fourth of a grain of the alkali to be taken three times in the day.

May 10th.—She is now in perfect health, and walks as well as any patient in the hospital. To be discharged cured at the first meeting of the weekly board. I saw this young woman about four months ago, and had the satisfaction to find that she had not suffered any relapse of her malady*.

ST. THOMAS'S HOSPITAL.

Case of Dislocation of the Head of the left Femur into the Ischiatic Notch; with Fracture of the right Thigh.

JAMES GRACE, aged 25, a stout muscular man (brewer's drayman), admitted on the 9th of February, a patient of Mr. Travers. He states, that whilst he was employed in removing a cask of beer from off the dray, weighing upwards of twelve hundred weight, it slipped from the pulley and struck against his right thigh, which knocked him down, and he fell with the left hip upon the curbstone. On examination, there was found an oblique fracture of the right femur, a little

above the condyles, and the upper portion of the fractured bone could be felt projecting at the lower and outer part of the thigh. A measurement of the two extremities being taken, from the anterior superior spinous processes of the ossa ilia to the bases of the patellæ, that on the right side was found to be eighteen inches, whilst that on the left measured half an inch more; the foot and knee on this side were likewise inverted; the direction of the limb being more oblique inwards than natural. The head of the bone could not be felt, but the great trochanter was imagined to be in its proper position. Abduction could only be performed with difficulty, and to a small extent; and on endeavouring to evert the limb by force, or produce rotation outwards, a sudden check was perceived. Flexion was easily produced to nearly right angles with the trunk, without causing any pain; but when carried to a greater extent he experienced a good deal, which was referred to the back part of the thigh, underneath the glutei muscles. There was no pain on the anterior part, but a considerable depression in the groin, which would easily sink into a hollow on pressure.

12th.—Had twenty-five leeches applied on 10th, for pain round the hip-joint, which was relieved in consequence. The fractured limb to-day was firmly bound by short splints, twenty ounces of blood abstracted from a vein in the arm, and the patient taken to the operating theatre for the purpose of having the luxated bone returned to its natural situation. A consultation was, however, previously held upon the case, by the surgeons of both hospitals; and after a deliberate examination, all concurred in the opinion that the head of the bone was then lying in the ischiatic notch. To effect a reduction, the man was placed upon the table, lying upon his right side, with the dislocated limb flexed upon the right thigh, and a girt passed between the pudendum and thigh, which fixed the pelvis to the table. A wetted roller was then passed around the limb, a little above the knee, and a leather pad fastened over it, and the pulleys applied in the usual manner. Extension was now kept up for about twenty minutes, and the head of the bone at the same time was attempted to be brought towards the acetabulum by a jack-towel fixed around the upper part of the thigh. At this time, the circular pad which was placed above the knee began to give way, and was replaced by another. During the extension, twelve ounces of blood were taken from the arm, which produced fainting. Abduction was next tried, and at the same time the limb was raised and afterwards rotated outwards; but finding the bone was not reduced, the pulleys were again applied, and extension continued to a greater degree for about half an hour, when they

* Barrisley's Hospital Reports.

were relaxed, and abduction and rotation forcibly made. The toes could now be everted, but there seemed to be a check when the limb was abducted; and the pulleys were again called into use, and extension kept up for about a quarter of an hour, when they were then relaxed, and it was found that the different evolutions of the limb were easily accomplished; consequently there remained no doubt but that the head of the bone had returned to its natural position, although it was not marked by any sudden snap or hasty motion of the limb. During the time that the patient was upon the table, he took nine doses of a solution of tartarized antimony, each dose containing a grain, which did not produce vomiting until he was removed to his bed, when the medicine operated freely. The time employed for the reduction, from the first application of the pulleys, was about two hours.

13th.—He says he is quite easy, and can move the limb in different directions without producing pain.

19th.—Feels considerably better; pulse 84, still full, but less hard; tongue more clean: bowels open; less pain in the limb, which is put up in Amesbury's apparatus.

22d.—Complained of a catarrhal affection two days ago. Pulse at present 96, full, and rather jerking. There is a good deal of tremor about the muscles of various parts.

25th.—Has been feverish for the last three or four days, with delirium, during which he attempted to get out of bed, and required the application of the strait waistcoat, but is now more tranquil, though still insensible to persons around him, and talking incoherently. Pulse 108, full, rather jerking. The integuments of the scrotum, on the right side, have given way, and a slough of cellular membrane appears at the wound. Mr. Travers now made an incision about two inches long down the swelling, and ordered a poultice to be applied to the part.

26th.—His mind continues wandering, but answers questions when put to him, and is still confined to his bed with the straight waistcoat. Pulse 108, less ample; bowels kept open with house medicine; complains of pain in his head, only however when asked the question. The appearance of the scrotum nearly as yesterday; a puncture with a lancet was now made on the left side, and afterwards enveloped with a poultice, as before. A blister was likewise ordered to be applied over the head.

27th.—The state of his mind is slightly better, but he is still in a continual tremor; is now able to put out his tongue, but with some difficulty, which he has not been able to do before for the last two or three days, on account of the stiffness of the lower jaw and continual tremulous motion which he experiences; it is dry, and a little coated. Pulse 102.

Black wash ordered to be applied to the sores on the scrotum.

28th.—There is now a considerable alteration for the better; his mind is perfectly tranquil, and he says he has no knowledge as to what has been going forward, but it seems to him as if he had been left to himself since the night he attempted to get out of bed. Complains of a good deal of pain in the scrotum; it is, however, much lessened in size, and the wounds begin to put on a more healthy appearance. Pulse 90, rather full, soft and compressible; bowels freely open; still somewhat tremulous; can open his mouth with more freedom; tongue slightly coated, white; straight waistcoat removed from him.

March 1st.—Pulse 78; tongue white, but not coated; opens his mouth perfectly well. He says he feels much better; bowels well open; has no pain in the head or scrotum. The wounds are looking healthy—the one on the left side nearly healed; the tremulous motion nearly left him, which is now confined to the hands. He says he has been drowsy, and restless during the night.

Ordered three grains of Calomel with one grain of Opium every night, and half an ounce of castor oil occasionally. Effervescent saline mixture every six hours.

3d.—The patient continues to improve, and he says he slept tolerably well last night. The bowels still continue to be well acted upon; tongue clean and moist; the scrotum is reduced to its natural size; the wound on the left side healed—the other looks healthy, and is reduced in size. Pulse 86, soft. He is now allowed half a pint of porter daily with his low diet.

6th.—To-day the thigh was put up in common splints; the motion at the fracture is perfectly free. His appetite is pretty good, and the tremor has entirely left him. The patient may now be considered as going on well.

BOOKS RECEIVED FOR REVIEW.

Observations on the Pathology of Venereal Affections. By Benjamin Travers, F.R.S. and Senior Surgeon to St. Thomas's Hospital.

On the Nature and Treatment of the most frequent Diseases of Children. By Miles Marley, F.L.S. Member of the Royal College of Surgeons.

A Treatise on Hysteria. By George Tate, Member of the Royal College of Surgeons, in London.

A Vade-Mecum of Morbid Anatomy, Medical and Chirurgical; with Pathological Observations and Symptoms. Illustrated by upwards of two hundred and fifty Drawings.

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